SOVIET PHYSICS
SOLID STATE

Volume 15 July 1973—June 1974

Leonid V. Azaroff, Advisory Editor

American Institute of Physics Translations Advisory Board
Robert T. Beyer, Chairman
J. George Adashko, Freeman Dyson, Dwight Gray
Morton Hamermesh, David Harker, Howard A. Robinson

a translation of the journal
ФИЗИКА ТВЕРДОГО ТЕЛА
Fizika Tverdogo Tela (Solid State Physics) of the Academy of Sciences of the USSR
Russian original Vol. 15, January—December 1973

Editorial Board
S. N. Zhurkov, Editor
M. I. Kornfel'd, Associate Editor L. I. Korovin, Secretary
A. I. Ansel'm, A. S. Borovik-Romanov, L. P. Gor'kov, O. V. Konstantinov
M. I. Korsunskii, M. A. Krivoglaz, G. V. Kurdyumov, I. M. Lifshitz
Ch. B. Lushchik, A. N. Orlov, A. F. Prikhot'ko, A. R. Regel'
S. M. Ryvkin, G. A. Smolenskii, V. M. Tuchkevich, B. K. Vainshtein
V. S. Vavilov, L. F. Vereshchagin, V. P. Zhuze

published by the American Institute of Physics

FIZIKA TVERDOGO TELA EDITORIAL BOARD

A. I. Ansel'm
A. S. Borovik-Romanov
L. P. Gor'kov
O. V. Konstantinov
M. I. Kornfel'd
(Associate Editor)
L. I. Korovin
(Secretary)
M. I. Korsunskii
M. A. Krivoglaz
G. V. Kurdyumov
I. M. Lifshits
V. P. Zhuze
Ch. B. Lushchik
A. N. Orlov
A. F. Prikhot'ko
A. R. Regel'
S. M. Ryvkin
G. A. Smolenskii
V. M. Tuchkevich
B. K. Vainshtein
V. S. Vavilov
L. F. Vershchagin
S. N. Zhurkov
(Editor)
Ioffe Physicotechnical Institute

Soviet Physics

SOLID STATE

A Translation of "Fizika Tverdogo Tela"

(Russian Original Vol. 15, No. 1, pp. 1-336, January, 1973)

Vol. 15, No. 1, pp. 1-250 July, 1973

CONTENTS

		PAGE	RUSS. PAGE
Energy Spectrum of the Surface States in the Si—SiO_2 System. N. A. Semushkina and G. B. Semushkin	(E)	1	3
Relaxation Frequency of the Gadolinium Sublattice in Gadolinium Iron Garnet. B. M. Lebed' and V. I. Mosel'	(E/T)	6	10
Influence of the Dimensions and Quality of Samples on the Low-Temperature Thermal and Electrical Conductivities of Bismuth. V. N. Kopylov and L. P. Mezhov-Deglin	(E)	8	13
External-Pumping-Induced Change in the Electron Component of the Permittivity of Photoconducting Semiconductors. R. G. Maev, I. A. Poluéktov, and V. I. Pustovoit	(T)	12	18
Absorption of Light in Paramagnetic Crystals. G. Ya. Selyutin	(T)	15	22
Exchange Interaction in Polynuclear Many-Electron Systems. B. S. Tsukerblat, M. I. Belinskii, and A. V. Ablov	(T)	19	29
Estimate of the Preexponential Term in the Diffusion Coefficient. P. P. Kuz'menko	(T/E)	25	38
Effects of the Layered Structure and the Absorption Edge of BiOI Single Crystals. A. N. Borets, M. V. Shtilikha, and G. D. Puga	(T/E)	28	42
Magnetization and Pinning in Single-Crystal $Ta_{70}Nb_{30}$ Alloy. O. V. Magradze and Dzh. G. Chigvinadze	(E)	32	48
Magnetoacoustic Resonance under Breakdown Conditions. S. A. Sokolov	(T)	35	52
Behavior of Complex Honeycomb Domain Structure of MnAlGe Crystals in Magnetic Fields. G. S. Kandaurova, A. V. Deryagin, and A. E. Lagutin	(E)	38	56
Quasilinear Relaxation of Electron Plasma in Semiconductors in Strong Applied Magnetic Fields. A. A. Ivanov and V. I. Ryzhii	(T)	41	61
Stimulated Antiresonance in Optical Spectra of Crystals. E. Yu. Perlin	(T)	44	66
Effect of Resonance Optical Pumping on Relaxation and Dynamic Characteristics of Lattice Vibrations. V. I. Emel'yanov	(T)	50	75
Cyclotron-Phonon Conductivity Oscillations in Semiconductors. V. I. Ryzhii	(T/E)	55	82
Optoelectric Effect in Quantizing Magnetic Fields. L. É. Gurevich and A. Ya. Vinnikov	(T)	58	87
Flexural Vibrations of Domain Walls and Dielectric Dispersion of Ferroelectrics. B. D. Laikhtman	(T)	62	93
Plastic Deformation during Stage II in Silicon. Yu. V. Malov and V. N. Rozhanskii	(E)	69	103
"Magnetic Anomalies" in the Mössbauer Effect. V. N. Kashcheev	(T)	73	109
Spectra of Ordinary Cyclotron Waves in Metals. T. D. Kaladze, D. G. Lominadze, and K. N. Stepanov	(T)	80	119
Comparative Investigation of the Anisotropy of Electrical Conductivity in Various SiC Polytypes. G. A. Lomakina and Yu. A. Vodakov	(E)	83	123
Thermodynamics of Unstable Vacancy—Atom Pairs in Interstices. V. M. Koshkin, B. I. Minkov, L. P. Gal'chinetskii, and V. N. Kulik	(T)	87	128
Investigation of the Fracture of Amorphous Solids under Steady-State Crack Propagation Conditions. V. A. Lobasenok, V. I. Aleshin, and E. V. Kuvshinskii	(E)	91	133

Copyright © 1973 by the American Institute of Physics

CONTENTS (continued)

		PAGE	RUSS. PAGE
Influence of Hydrostatic Pressure on the Ionic Conductivity of AgCl and AgCl + $MnCl_2$ Single Crystals. A. N. Murin, I. V. Murin, and V. P. Sivkov	(E/T)	98	142
Hysteresis of Magnetization Reversal in Orthoferrite Crystals. V. I. Khrabrov	(E)	102	148
X-Ray Emission Spectra of Molybdenum in Its Germanides. V. V. Nemoshkalenko, V. P. Krivitskii, L. I. Nikolaev, and M. A. Mindlina	(E)	107	155
Effect of Odd Normal Vibrations on the Paramagnetic Spin–Lattice Relaxation. A. F. Klimachev	(T)	110	159
Motion and Deformation of Cavities in an NaCl Single Crystal in a Temperature Gradient Field. Ya. E. Geguzin and V. S. Kruzhanov	(E/T)	114	165
Electronic Structure of Donor–Acceptor Molecular Crystals. V. Ya. Krivnov and A. A. Ovchinnikov	(T)	118	172
Investigation of the Condensation of Excitons in Germanium by the Light-Scattering Method. N. N. Sibel'din, V. S. Bagaev, V. A. Tsvetkov, and N. A. Penin	(E)	121	177
Determination of the Location of Interstitial Sodium Atoms in a Silicon Lattice. N. A. Skakun, N. P. Dikii, P. P. Matyash, and V. M. Korol'	(E)	123	180
Nonlinear Effects in the Nuclear Echo in $RbMnF_3$. M. P. Petrov, G. A. Smolenskii, A. A. Petrov, and S. I. Stepanov	(E/T)	126	184
Mechanism of Discrete Spectral Diffusion in the ESR of Radicals in Solids. V. I. Muromtsev, V. V. Pomortsev, and V. G. Cheredintsev	(E)	132	193
Photoelectron Spectrum and Structure of Thin Tb Films. S. E. Strakovskaya, R. L. Nemchenok, and Yu. M. Voronin	(E)	135	197
X-Ray (N_{IV}, $_V$) Emission Spectra of Lanthanum and Cerium. V. A. Fomichev, S. A. Gribovskii, and T. M. Zimkina	(E)	138	201
Theory of the Profile of Exciton Absorption Bands of Mixed Crystals. O. A. Dubovskii	(T)	141	205
ESR Investigation of Chromium Telluride at Pressures up to 50 kbars. V. A. Shanditsev, L. F. Vereshchagin, E. N. Yakovlev, N. P. Grazhdankina, and T. I. Alaeva	(E)	146	212
Elementary Electronic Excitations in Quartz. Yu. P. Zakis, A. N. Trukhin, and V. P. Khimov	(E)	149	216
Localization and Composition of Impurity Clusters in Silicon and Their Influence on Emission Properties. V. F. Bibik, P. G. Borzyak, G. A. Zykov, N. G. Nakhodkin, and A. F. Yatsenko	(E)	152	220
Space Symmetry of Polar Antiferroelectric Crystals. A. G. Titov	(T)	154	223
Theory of Magnetic Transitions in Antiferromagnets. I. A. Akhiezer and Z. A. Spol'nik	(T)	157	226
Dichroism and Optical Anisotropy of Media with Oriented Spins of Free Electrons. A. G. Aronov and E. L. Ivchenko	(T)	160	231
Nuclear Magnetic Resonance and Relaxation of Thulium Ethyl Sulfate. F. L. Aukhadeev, I. I. Valeev, I. S. Konov, V. A. Skrebnev, and M. A. Teplov	(E)	163	235
Symmetry of Ti^{3+} Activator Centers in Glassy Silica. A. V. Amosov, V. K. Zakharov, and D. M. Yudin	(E)	167	241
Interaction of Rayleigh Waves with Dislocations. A. K. Morocha, T. D. Shermergor, and A. N. Yashina	(T)	172	248
Effect of Nonmagnetic Impurities on the Spin–Lattice Relaxation in Superconductors with an Electron Transition. I. I. Fal'ko and A. D. Serdyuk	(T)	176	254
BRIEF COMMUNICATIONS			
Dependence of the Exoemission Current on the Electron Work Function. A. M. Shkil'ko, V. D. Rogozhin, and A. A. Kresnin	(T/E)	180	261
Nature of Deformation Hardening of Alkali Halide Crystals under Simple Slip Conditions. B. I. Smirnov and T. V. Samoilova	(E)	182	262
Slowing Down of Cracks in Polymethylmethacrylate. V. I. Aleshin and E. V. Kuvshinskii	(E)	185	266
Magnetic Properties of Niobium-Doped Fluorite Crystals. R. Yu. Abdulsabirov, L. D. Livanova, Yu. F. Mitrofanov, Yu. E. Pol'skii, V. G. Stepanov, and M. L. Falin	(E)	187	268
Nonlinear Quenching of the Fluorescence of Anthracene Crystals at Low Temperatures. V. A. Benderskii, V. Kh. Brikenshtein, and A. G. Lavrushko	(E)	189	270
Hygromechanical Effect in Ionic Crystals. A. A. Shpunt and O. A. Nabutovskaya	(E)	192	273
Nature of Nonferroelectric Phase Transitions in Chain Crystals. D. M. Bercha and D. Yu. Baletskii	(T)	194	275
Thermal Conductivity of $(CdSnAs_2)_{1-x}(2CdSe)_x$ Solid Solutions in Magnetic Fields. D. Kh. Amirkhanova and P. P. Khokhlachev	(E)	196	277

CONTENTS (continued)

		PAGE	RUSS. PAGE
Measurements of the Piezoelectric Coefficients of Lithium Niobate by the Interference Dilatometer Method. D. F. Kiselev and M. M. Firsova	(E)	198	279
Suppression of Nonlinear Effects in Propagation of Hypersonic Waves in Indium Antimonide. S. N. Ivanov, G. D. Mansfel'd, and E. N. Khazanov	(E)	200	282
Detection of Deep Levels in Semiconductors. A. I. Ivashchenko, G. G. Kovalevskaya, V. I. Alyushina, D. N. Nasledov, and S. V. Slobodchikov	(E)	202	284
Lattice Absorption of Ultrasound in CdS Deduced from Optoacoustic Scattering. Yu. V. Ilisavskii and L. A. Kulakova	(E)	204	286
Magnetically Ordered $B_2O_3-SiO_2-PbO-Fe_2O_3$ Glasses. K. A. Sablina and G. A. Petrakovskii	(E)	206	289
Plastic Deformation of Solidified Inert Gases. Yu. S. Strotlov, A. V. Leont'eva, D. N. Bol'shutkin, N. F. Kulik, and A. V. Markov	(E)	208	291
Influence of Heavy Pb^{2+} Impurities on the Low-Temperature Specific Heat of KCl. K. A. Kvavadze and G. R. Augst	(E)	210	293
Influence of Cobalt Impurities on Galvanomagnetic Properties of Indium Antimonide. K. I. Vinogradova, D. N. Nasledov, Yu. S. Smetannikova, and T. K. Tashkhodzhaev	(E)	212	295
Magnetic Properties and Mössbauer Effect in Ferroelectric $Bi_2Ti_2Fe_6O_{17}$. S. A. Kizhaev, G. D. Sultanov, and F. A. Mirishli	(E)	214	297
Absorption Spectrum of Terbium in the Ultrasoft X-Ray Region. S. A. Gribovskii and T. M. Zimkina	(E)	217	300
Mechanical Stresses in Films of $(BiSb)_2Te_3$. B. M. Gol'tsman and M. G. Komissarchik	(E)	219	301
Influence of Oxygen Ions on the Photoconductivity of KCl and KBr Single Crystals. M. L. Kats, K. E. Gyunsburg, L. I. Golubentseva, and N. P. Zvezdova	(E)	221	303
Investigation of Hyperfine Interactions in Samarium-Cobalt Compounds by the Mössbauer Method. G. N. Belozerskii, N. V. Belyanina, I. N. Ivanova, S. A. Tsaturyan, and A. I. Shapiro	(E)	223	305
Annihilation of Positrons in Crystalline and Amorphous Semiconductors. I. I. Bardyshev, V. I. Mikhailov, A. D. Tsyganov, and V. P. Shantarovich	(E)	225	308
Depolarization of Ferroelectric Crystals of $BaTiO_3$, $PbTiO_3$, and $LiNbO_3$ by Shock Waves. E. Z. Novitskii, O. A. Kleshchevnikov, V. N. Mineev, and A. G. Ivanov	(E)	227	310
Pressure-Induced Changes in the Cubic Splitting Parameter of the ESR Spectrum of Gd^{3+} Ions in Fluorite-Type Crystals. S. V. Kasatochkin, T. I. Alaeva, E. N. Yakovlev, and L. F. Vereshchagin	(E)	229	312
Influence of Thermal Jogs on the Motion of Basal Dislocations in Zinc. Ya. M. Soifer and V. G. Shteinberg	(E)	231	313
Photoplastic Effect in NaCl:O^{2-} Crystals. I. M. Spitkovskii and N. A. Tsal'	(E)	233	316
Absorption of Ultrasound by the Lattice of Indium Antimonide at 77°K. S. N. Ivanov, G. D. Mansfel'd, and E. N. Khazanov	(E)	235	317
Structure of the Edge Luminescence Spectra of Cadmium Selenide at High Excitation Densities. R. A. Baltrameyunas, Yu. Yu. Vaitkus, Yu. K. Vishchakas, and V. V. Nyunka	(E)	236	319
Transition Emission of Sound by Dislocations. V. S. Boiko, R. I. Garber, L. F. Krivenko, and S. S. Krivulya	(T/E)	238	321
Frequency of Vibrations of a Dislocation in the Elastic Field of a Point Defect. V. M. Chernov	(T)	240	323
Influence of Uniaxial Mechanical Deformation on the Optical Properties of Alkali Halide Crystals. V. N. Vishnevskii, I. V. Stefanskii, M. P. Kuzyk, Z. S. Kulik, and L. N. Kulik	(E)	242	325
Quantum Interference Effects in Statistical Systems of Josephson Junctions in the Presence of Fluctuations. I. I. Yurchenko, V. S. Kartavtsev, V. I. Matveev, and I. M. Dmitrenko	(E)	244	328
Influence of Nonresonance States on Optical Induction and Echo. A. G. Shagidullin and V. V. Samartsev	(T)	246	330

FIZIKA TVERDOGO TELA EDITORIAL BOARD

A. I. Anel'm
A. S. Borovik-Romanov
L. P. Gor'kov
O. V. Konstantinov
M. I. Kornfel'd
(Associate Editor)
L. I. Korovin
(Secretary)
M. I. Kornanskii
M. A. Krivoglaz
G. V. Kurdyumov
I. M. Lifshitz
Ch. B. Lushchik
A. N. Orlov
A. F. Prikhot'ko
A. R. Regel'
S. M. Ryvkin
G. A. Smolenskii
V. M. Tuchkevich
B. K. Vainshtein
V. S. Vavilov
L. F. Vershchagin
S. N. Zhurkov
(Editor)
Ioffe Physicotechnical Institute
V. P. Zhuze

Soviet Physics

SOLID STATE

A Translation of "Fizika Tverdogo Tela"

(Russian Original Vol. 15, No. 2, pp. 337-664, February, 1973)

Vol. 15, No. 2, pp. 251-468 August, 1973

CONTENTS

		PAGE	RUSS. PAGE
Paramagnetic Resonance of Three-Nucleus Clusters of Chromium and Iron Atoms. Yu. V. Yablokov, V. A. Gaponenko, A. V. Ablov, and T. N. Zhikhareva.	(E)	251	337
Effect of Magnetostriction on the Temperature Dependence of NMR in Ferromagnetic Films. A. N. Pogorelyi, N. A. Lesnik, and N. A. Belous.	(E)	255	345
Enlargement of Quenching Dislocation Loops during Annealing of Aluminum and Its Alloys. V. N. Rozhanskii, V. V. Kirichenko, and V. V. Slezov	(E)	258	349
Spatial Distribution and Condensation Mechanism of Gold Centers on Ionic Crystals. V. I. Trofimov and É. Kh. Enikeev	(E/T)	262	355
Effects of an Electric Field on Electronic Structure in Single Crystals of Vanadium Pentoxide. K. A. Valiev, V. G. Mokerov, and A. V. Rakov.	(E/T)	265	361
Acoustic Paramagnetic Resonance of Fe^{2+} and Fe^{3+} in Gallium Arsenide. E. M. Ganapol'skii	(E/T)	269	368
Dislocation Structure in NaCl Crystals Deformed along a Cubic Face at Room Temperature. O. V. Klyavin, S. G. Simashko, and A. V. Stepanov.	(E)	274	376
High-Temperature Transition to Metallic Conduction in Se–Te Melts. A. A. Andreev, V. A. Alekseev, A. L. Manukyan, and L. N. Shumilova	(E/T)	277	382
Investigation of the State of Impurity Tin Atoms in Nickel Oxide by the Mössbauer Method. F. S. Nasredinov and P. P. Seregin.	(E)	279	385
Heating of Electrons with Light in n InAs. M. P. Mikhailova, D. N. Nasledov, S. V. Slobodchikov, and M. Khamrokulov	(E)	282	390
Effect of Electric Fields on the Absorption of Light by Deep Impurity Centers. V. S. Vinogradov	(T)	285	395
Cross-Relaxation in Systems of Spins with a Nonequidistant Energy Spectrum. M. I. Rodak.	(T)	290	404
Isomer Shifts in Pt_3Fe Alloys and Stainless Steel under Pressure. I. N. Nikolaev and L. S. Pavlyukov	(E/T)	294	410
Role of Combination Frequencies in Nonlinear Wave Interaction during Supersonic Carrier Drift in Piezoelectric Semiconductors. B. L. Timan, V. D. Ryzhikov, and V. K. Komar'	(T/E)	296	413
Spin-Wave Resonance in Paramagnetic Metals. V. I. Yukalov	(T)	299	417
General Nonstationary Problem of Lattice Dynamics in Harmonic Approximation. A. S. Dolgov	(T)	302	421
Interaction of Waves in Semiconductors with Nonparabolic Conduction Bands. L. A. Ostrovskii and V. G. Yakhno	(T)	306	427
Spin–Lattice Relaxation of F and F_A(Li) Centers in KCl:Li^+. M. F. Deigen, B. D. Shanina, V. S. Vikhnin, I. M. Zaritskii, A. A. Konchits, G. Korradi, R. Voska, V. M. Maevskii, and V. V. Udod	(E/T)	310	434
Sound in Quantum Crystals. P. S. Kondratenko and V. S. Levchenkov	(T)	314	440
Impact Ionization Mechanism in the Optical Breakdown of Transparent Dielectrics. R. A. Vlasov, K. P. Grigor'ev, I. I. Kantorovich, and G. S. Romanov.	(T)	317	444

Copyright © 1973 by the American Institute of Physics

CONTENTS (continued)

		PAGE	RUSS. PAGE
Spin Waves in Yttrium Iron Garnet with a Periodic Domain Structure. A. A. Solomko and V. I. Mykityuk	(E/T)	320	449
Long-Wavelength Optical Phonons in the Disordered Mixed System of $CdSe_{1-x}Te_x$ Crystals. E. A. Vinogradov, L. K. Vodop'yanov, and G. S. Oleinik	(E)	322	452
Anomalously Large Spontaneous Rotary Electrooptic Effect in Ferroelectric $NaNH_4SeO_4 \cdot 2H_2O$. K. S. Aleksandrov, A. T. Anistratov, N. R. Ivanov, S. V. Mel'nikova, and L. A. Shuvalov	(E)	324	456
Spectroscopic Features of "Drop" Luminescence in Doped Germanium Crystals. B. V. Novikov, R. L. Korchazhkina, and N. S. Sokolov	(E)	326	459
Diffraction of Pulses of Elongation and Bending in a Crack. V. M. Finkel', Yu. A. Brusentsov, V. E. Sereda, and Yu. I. Tyalin	(E)	328	463
Theory of Avalanche Ionization in Transparent Dielectrics under the Action of a Strong Electromagnetic Field. A. I. Rubinshtein and V. M. Fain	(T)	332	470
Multiphonon Resonance Combination Scattering in $Zn_xCd_{1-x}Te$ Crystals. A. G. Plyukhin, L. G. Suslina, and E. B. Shadrin	(E)	337	479
Dispersion of the Nonlinear Refractive Index in Noncentrosymmetric Crystals. Yu. V. Shaldin and D. A. Belogurov	(E)	339	483
Heating and Cooling of an Electron Gas by Electromagnetic Radiation in a Quantizing Magnetic Field. V. I. Ryzhii	(T)	341	486
Low-Temperature Photoconductivity and Absorption Spectra of BiI_3 Single Crystals. A. M. Vainrub, A. V. Il'inskii, and B. V. Novikov	(E)	343	490
Microstructure and Magnetization Details of Films with Stripe Domains. D. G. Berezin, T. A. Dunaeva-Mitlina, and B. V. Khramov	(E)	345	493
Hydrolytic Surface Defects and High-Strength State of Fused Quartz. V. A. Bershtein, S. N. Novikov, and V. V. Nikitin	(E)	348	498
Monomolecular and Bimolecular Thermally Stimulated Luminescence Peaks of Ionic Crystals Containing Electron Traps of a Single Type. V. I. Leiman	(E/T)	351	503
Dipole Moments and Ferroelectric Phase Changes in Crystals Containing Jahn–Teller Centers. B. G. Vekhter	(T)	354	509
Mössbauer Effect and Superconductivity in Tin and Gallium in Porous Glass. V. N. Bogomolov and N. A. Klushin	(E)	357	514
Electron-Nuclear Double Resonance in Alkali Halides in an External Electric Field. N. P. Baran, V. G. Grachev, M. F. Deigen, S. S. Ishchenko, and L. I. Chernenko	(E/T)	360	519
Polygonization in Sodium Chloride Crystals under Sign-Varying Deformation. E. P. Kostyukova, E. L. Pishchik, and B. M. Rovinskii	(E)	363	524
Nuclear Relaxation Induced by Impurities in the Case of a Lorentzian Cross-Relaxation Curve. V. A. Skrebnev	(T)	365	527
Bethe and Davydov Magnetic Splittings in Weakly Ferromagnetic $KMnF_3$. V. N. Kharkyanen and É. G. Petrov	(T)	368	531
Effect of Interband Impurity Scattering on Metal–Dielectric Phase Transitions. Do Chan Kat, Yu. V. Kopaev, and R. Kh. Timerov	(T)	372	537
Field of Nucleation in a Ferromagnetic Plate with a Local Variation in the Magnetic Anisotropy Constant. L. G. Onoprienko	(T)	375	542
BRIEF COMMUNICATIONS			
Some Features of the Interaction between Primary and Forest Dislocations in Zinc at 1.5°K. V. L. Vladimirova and F. F. Lavrent'ev	(E)	379	549
Cohesive Energy and Mechanical Properties of Alkali Metals Calculated Using the Krasko–Gurskii Model Pseudopotential. V. A. Zhdanov and V. V. Dobrotvorskii	(T)	381	552
Magnetization and Magnetization Processes in Yttrium Iron Garnets with a Laminar Domain Structure. A. A. Solomko, V. I. Mykityuk, and Yu. A. Gaidai	(E)	383	554
Effect of Plastic Deformation on the Optical Properties of KCl–Eu Crystal Phosphors. N. P. Kalabukhov and V. K. Kovalev	(E)	385	557
Magnetic Resonance of V^{51} Nuclei in Orthovanadates of Chromium, Iron, Cobalt, and Nickel. R. N. Pletnev, V. N. Lisson, and V. A. Gubanov	(E)	386	558
Polarized Microwave Echo in $Ba_2NaNb_5O_{15}$ Single Crystals. B. P. Smolyakov, N. B. Angert, U. Kh. Kopvillem, and R. Z. Sharipov	(E)	387	559
Nature of Magnetic Ordering in Neodymium Sulfide near 45°K. V. I. Novikov, A. M. Pogarskii, and S. S. Shalyt	(E)	388	561

CONTENTS (continued)

		PAGE	RUSS. PAGE
Separation of Metallic Lithium in LiF Crystals under Irradiation by Electrons. G. I. Natsvlishvili and P. I. Metreveli	(E)	389	562
Role of Electrons in Dechanneling of Particles from a Planar Channel in a Single Crystal. G. P. Pokhil and L. V. Ukrainskaya	(T)	390	564
Inequivalence of Direct and Exchange Types of Scattering in Electromagnetic Fields. V. N. Strekalov	(T)	391	566
Effect of Domain Structure on the Propagation of Elastic Waves in Lithium Niobate. T. A. Mamatova, L. A. Fokina, and V. E. Lyamov	(E)	393	568
Effects of Doping on the Mechanical Properties and Dislocation Mobility for BaF_2 Single Crystals. S. N. Val'kovskii, É. M. Nadgornyi, E. A. Simun, and V. K. Karpovich	(E)	395	570
Influence of Structure Defects on Galvanomagnetic Effects in Bismuth Films. G. A. Ivanov, V. M. Grabov, and T. V. Mikhailichenko	(E/T)	397	573
Self-Focusing of Ultrashort Laser Pulses in Solid Dielectrics. G. M. Zverev, V. S. Naumov, and V. A. Pashkov	(E)	399	575
Collapse of the Magnetic Sublattices in Antiferromagnetic Ordered Perovskites Containing Cobalt. V. A. Bokov, A. T. Starovoitov, and N. N. Parfenova	(E)	400	577
Anisotropy of the Attenuation of Hypersound in Yttrium Iron Garnet. V. N. Agartanov	(E)	402	579
Changes in the Magnetic and Magnetostrictive Properties of the Ferrite $NiFe_{0.4}Cr_{1.4}O_4$ on Transition from the Cubic to the Tetragonally Distorted Phase. K. P. Belov, A. N. Goryaga, L. G. Antoshina, and Yu. F. Popov	(E)	403	580
ESR Spectra of Cr^{3+} and Cr^{5+} in Sodium Vanadate. L. V. Dmitrieva, Z. N. Zonn, and E. V. Maksimov	(E/T)	405	582
Optical Properties of Yttrium Iron Garnet. A. I. Galuza, V. V. Eremenko, and A. P. Kirichenko	(E)	407	585
Temperature Dependence of the Electric Field Gradient in Antiferroelectric $PbHfO_3$. V. A. Klyucharev, V. P. Bozhko, V. V. Zakurkin, and A. P. Gaidamaka	(E)	409	587
Measurement of Impurity Electroabsorption in Piezoelectric Crystals. G. A. Shepel'skii, V. A. Budyanskii, and E. A. Sal'kov	(E)	411	589
Effect of Uniaxial Compression on the Shape of the Intrinsic Absorption Edge in CdTe. M. V. Andriyashik, M. V. Kurik, V. S. Manzhara, V. V. Matiak, and I. F. Skitsko	(E)	413	591
Calculated Lorentz Factors for Crystals with Various Unit Cell Shapes. D. D. Karov, S. N. Koikov, and M. N. Rozova	(T)	415	594
Magnetic Susceptibility of Terbium near the Néel Point. L. A. Boyarskii and M. A. Starikov	(E)	417	597
Effect of an External Field on the ESR Spectrum of Mn^{2+} in $MgWO_4$. V. S. Kropotov, L. I. Potkin and R. Sh. Usmanov	(E)	418	599
New Type of Domain Structure in Films with Perpendicular Anisotropy. L. S. Palatnik, L. Z. Lubyanyi, and L. I. Lukashenko	(E)	419	600
Recharging Effect in Dielectrics. O. B. Evdokimov and N. P. Tubalov	(E)	421	603
Influence of Temperature on the Annihilation of Positrons in Single Crystals. K. P. Aref'ev, S. A. Vorob'ev, and V. P. Kileev	(E)	422	604
Knight Shifts in the Titanium–Zirconium–Hydrogen System. E. F. Khodosov and V. I. Kuryshko	(E)	424	606
Mechanism of the "Anomalous" Amplitude Dependence of the Change in the Shear Modulus of Single Crystals. Ya. M. Soifer and V. G. Shteinberg	(E)	425	607
Yellow-Green Luminescence of Diamond Crystals. D. S. Nedzvetskii and V. A. Gaisin	(E)	427	610
N-Shaped Current–Voltage Characteristic of a Conductor Close to the Anomalous Metal–Insulator Transition Point. N. S. Lidorenko, L. T. Kreshchishina, and É. L. Nagaev	(T)	429	613
Nature of Dislocation Loops Generated as a Result of Precipitation of a Solid Solution of Antimony in Silicon. T. P. Timasheva and L. M. Sorokin	(E)	431	615
NMR and FMR in Highly Dispersed Nickel Powders. A. E. Ermakov, V. V. Serikov, O. A. Ivanov, and Ya. S. Shur	(E)	433	617
New Type of Domain Structure in Iron (001) Single-Crystal Films. A. A. Potseluiko and V. G. Pyn'ko	(E)	435	619
Formation of Amorphous Films When Tellurium Is Condensed on Au, Ag, and Cu. I. E. Bolotov and A. V. Kozhin	(E)	436	620
Interaction of an Electron Beam with Solid State Plasma. R. R. Kikvidze, V. G. Koteteshvili, and A. A. Rukhadze	(T)	438	622

CONTENTS (continued)

		PAGE	RUSS. PAGE
Shift of NMR Frequencies of Fe^{57} Nuclei in Domain Walls of Single Crystals of Hexagonal $BaFe_{12}O_{19}$ Ferrite in an Applied Field. A. V. Zaleskii	(E/T)	439	624
Spin Correlation Functions and the Mössbauer Effect in Ferromagnets with Impurities. V. V. Svetozarov	(T)	441	626
NMR Relaxation, Electrical Conductivity, and Viscosity of Amorphous Monosaccharides over the Softening Range. A. N. Poloskin and Yu. I. Rozenberg	(E)	443	628
Abrupt Deformation and Nonuniformity of the Internal Stress Field in KCl and LiF Crystals. V. Z. Bengus, S. N. Komnik, and I. T. Ponomarenko	(E)	445	630
Parallel Pumping of the Spin-Wave Instability in Ferrites with Various Saturation Magnetizations. V. L. Grankin, G. A. Melkov, and V. A. Ruban	(E)	447	632
Distribution of Volume Discontinuities in Deformed Aluminum. V. I. Betekhtin, A. I. Petrov, and V. N. Savel'ev	(E)	449	634
Magnetoplastic Effect in Polycrystalline Nickel. I. A. Gindin, I. S. Lavrinenko, and I. M. Neklyudov	(E)	451	636
Oxygen Parameter and Crystal-Field Constants in Substituted Ferrite Systems. E. P. Naiden and S. M. Zhilyakov	(T/E)	452	638
Theory of the Heating of Carriers in Piezoelectric Semiconductors by Acoustic Waves. A. Pardaev and P. Kh. Musaev	(T)	454	640
Calculation of the Coefficient of Absorption of Strong Light by Carriers in Semiconductors. E. Dzhaksimov	(T)	456	644
Cross-Relaxation in Spectrally and Spatially Inhomogeneous Media. V. S. Mashkevich and E. A. Shadchin	(T)	457	645
Structure of the Mixed State in Type II Superconducting Films Subjected to a Transverse Magnetic Field. K. B. Efetov	(T)	459	647
Modeling of Field Evaporation from the Surface of a Field Ion Emitter. V. V. Vinogradov, V. T. Borisov, and L. P. Potapov	(T)	460	649
Nature of the Diffusion Distribution Region near the Surface. R. Sh. Malkovich and I. V. Nistiryuk	(E)	462	651
Dynamic Effect of a Beam of γ Quanta in a Solid. V. T. Lazurik-Él'tsufin	(T)	464	654
Thermal Conductivity of Pyrolytic Boron Nitride. V. S. Oskotskii, V. V. Popov, I. A. Smirnov, P. V. Tamarin, V. S. Neshpor	(E)	465	656
ERRATUM		467	

Soviet Physics—Solid State Vol. 15, No. 3, September 1973

(Russian original: Fiz. Tverd. Tela, Vol. 15, No. 3, pp. 665–968, March 1973)

471 (665) Factors responsible for the formation of complexes of decorating particles on alkali halide crystals ..... V. M. Kosevich, A. A. Sokol

474 (671) Magnetoacoustic resonance in ferromagnets with impurities ..... V. V. Gann, L. G. Zazunov

477 (676) Temperature dependence of dislocation mobility in gamma-irradiated NaCl crystals ..... G. A. Ermakov, É. M. Nadgornyi

480 (680) Theory of nonradiative transitions ..... V. G. Plotnikov, G. G. Konoplev

485 (689) Rigorously solvable model of a transport equation governing the absorption of sound in metals ..... V. M. Kontorovich, N. A. Sapogova

489 (695) Inelastic scattering of electrons by graphite ..... A. P. Kazantsev, T. L. Matskevich

492 (700) Amplification of magnetostatic waves in ferromagnetic films due to the drift current of carriers ..... V. P. Lukomskii, Yu. A. Tsvirko

496 (706) Electron spin resonance of Co^{2+} ions in lithium–gallium spinel ..... A. Yu. Kozhukar', V. N. Seleznev, G. A. Tsintsadze, V. A. Shapovalov

499 (710) Influence of the parameters of the potential function of long-lived traps on the nature of the photoconductivity of amorphous selenium films ..... M. I. Korsunskii, V. V. Klimenko

502 (715) Ultrasonic investigation of the nuclear quadrupole spin–phonon coupling in NaCl, NaF, and LiF crystals .. G. L. Antokol'skii, L. N. Fershtat, V. A. Shutilov

507 (724) Adsorption of barium on the (112) face of tungsten ..... V. K. Medvedev, T. P. Smereka

513 (733) Effect of paramagnetic resonance on electrical conductivity of semiconductors in strong electric fields . A. N. Zaitsev

517 (740) Calculation of diffusion under thermal desorption conditions ..... A. I. Gubanov

520 (744) Exciton transition in a doped anisotropic semimetal ..... Yu. V. Kopaev, T. T. Mnatsakanov

525 (752) Resonant properties of the resistive instability ..... A. L. Sanin

527 (755) Distribution of impurity atoms about a moving dislocation. V. S. Altundzhi, B. Ya. Lyubov

531 (762) Distribution of the magnetization in ferrite films with stripe domains ..... D. G. Berezin, T. A. Dunaeva-Mitlina, B. V. Khramov

534 (766) Special features of phonon thermal conductivity of crystals with narrow quasilocalized vibration modes ..... G. S. Zavt, V. I. Altukhov

536 (769) Influence of tellurium and zinc on the diffusion and solubility of copper in GaSb ..... A. I. Blashku, T. D. Dzhafarov

538 (772) Mobility of dislocations in crystals with the sphalerite lattice ..... S. A. Erofeeva, Yu. A. Osip'yan

541 (777) Radiation defects generated by the (n, γ) reaction in tin chalcogenides ..... P. P. Seregin, É. P. Savin

543 (781) Parametric excitation of spin waves in a ferrite in the vicinity of phase transitions ..... V. G. Bar'yakhtar, D. A. Yablonskii, M. L. Polyakov, V. L. Sobolev

548 (789) Luminescence of excitons localized at donor–acceptor dipoles in α SiC(6H) ..... I. S. Gorban', A. V. Slobodyanyuk

550 (793) Strong turbulence and self-focusing of parametrically excited spin waves ..... V. S. L'vov, A. M. Rubenchik, V. V. Sobolev, V. S. Synakh

555 (801) Cooperative kinetics of the fracture of solid polymers. Focus mechanism ..... Yu. Ya. Gotlib, A. V. Dobrodumov, A. M. El'yashevich, Yu. E. Svetlov

560 (810) Cooling of an electron gas in quantizing magnetic fields by electromagnetic radiation ..... V. I. Ryzhii

562 (813) Electric field gradients at the nuclei of iodine impurities and tellurium atoms in $A^{I}B^{III}Te_2$ crystals ..... K. V. Makaryunas, A. K. Dragunas, É. K. Makaryunene, O. K. Vaichyulene, M. L. Bal'chyunene

565 (817) Deformation splitting of Raman lines of fluorite crystals . A. A. Kaplyanskii, B. Z. Malkin, V. K. Negoduiko

Copyright © 1973 by the American Institute of Physics

569 (824) Pressure-induced gapless state in semiconducting $Bi_{1-x}Sb_x$ alloys. . . . . N. B. Brandt, [illegible] Ya. G. Ponomarev
576 (836) Determination of the parameters of the exciton–phonon interaction in the absorption spectrum of a molecular crystal. . . . . V. K. Dolganov, E. F. Sheka
578 (840) Zeeman nuclear relaxation of tunneling centers. . . . . V. I. Konovalov
580 (843) Dynamic polarization of protons and relaxation processes in ethylene glycol with Cr^V complexes. . . . . V. A. Atsarkin, P. E. Budkovskii, G. A. Vasneva, V. V. Demidov, E. A. Novikov, O. A. Ryabushkin, Yu. V. Funtikov
585 (850) Galvanomagnetic effects in p-type Bi_2Te_3 and the model of two valence of subbands . . . . . V. V. Solugub, A. D. Goletskaya, I. G. Lang, S. T. Pavlov
589 (856) Diffusion and solubility of hydrogen and deuterium in NaCl crystals . . . . . N. N. Alekseenko, P. V. Volobuev, P. E. Suetin
591 (859) Interaction between conduction electrons and lattice vibrations in the presence of a strong magnetic field . . . L. S. Kukushkin
595 (865) Some features of the low-temperature luminescence of molecular crystals. . . . . V. K. Dolganov, F. B. Slobodskoi, E. F. Sheka
598 (870) Activation of the photocurrent in organic dyes. . . . . N. V. Dubinin, B. Sh. Barkhalov, É. L. Lutsenko
601 (874) Influence of small amounts of tin on the morin transition temperature in hematite (α Fe_2O_3) . . . . . E. V. Lamykin, P. B. Fabrichnyi, A. M. Babeshkin, A. N. Nesmeyanov
604 (878) Stark effect in free and bound excitons in a CdSe crystal. . B. S. Razbirin, I. N. Ural'tsev, A. A. Bogdanov
608 (884) Effect of electric field on vibrational spectrum of ferroelectric $NaNO_2$. . . . . É. V. Chisler, V. Yu. Davydov

BRIEF COMMUNICATIONS

610 (888) Analogy between a diffusionless transition and the motion of a dislocation across obstacles . . . . . D. E. Temkin
612 (890) Magnetic anisotropy of cerium-substituted yttrium iron garnet . . . . . K. P. Belov, N. V. Volkova, V. I. Raitsis
614 (892) Kinetic effects in field emission of electrons from high-resistivity n-type Si . . . . . N. V. Egorov, G. N. Fursei, A. V. Kocheryzhenkov
616 (895) Spontaneous electroabsorption in GaAs . . . . . Yu. N. Berozashvili, A. V. Dundua, D. Sh. Lordkipanidze
618 (897) Influence of external stresses on the domain structure of "supercritical" films . . . . . E. A. Gorokhov, V. A. Buravikhin, G. N. Selin, I. N. Kondrat'ev
619 (899) Temperature dependence of resonance frequencies of a biaxial antiferromagnet. . . . . V. A. Popov, V. I. Skidanenko
621 (901) Microplasticity of germanium whiskers . . . . . V. S. Postnikov, S. A. Ammer, A. I. Drozhzhin
623 (903) Nuclear magnetic resonance of Fe^{III} in domain walls of $DyFeO_3$ single crystals . . . . . A. V. Zalesskii, A. M. Savvinov, I. S. Zheludev, A. N. Ivashchenko
625 (905) Second-harmonic generation in lead dithionate . . . . . V. A. Kizel', A. Yu. Klimova, V. M. Koval'chuk, Z. B. Perekalina
627 (907) Photoelastic properties of proustite . . . . . S. Kh. Esayan, V. V. Lemanov, I. S. Rez, O. V. Shakin
628 (909) Giant negative magnetocaloric effect in a ferromagnet . . . V. M. Belova, V. I. Nikolaev, V. M. Stuchebnikov
629 (910) Observation of pores in nickel irradiated with 40-keV nickel ions . . . . . V. N. Bykov, A. G. Vakhtin, S. Ya. Lebedev, S. D. Panin
630 (912) Investigation of the kinetics of motion of dislocations in germanium . . . . . N. A. Badilenko, N. N. Novikov, E. L. Zubar'kova
632 (914) Some features of the critical behavior of the ferrite $Cu_{0.4}Cd_{0.6}Fe_2O_4$ near the Curie point . . . . . I. K. Kamilov, Kh. K. Aliev, G. M. Shakhshaev
634 (916) Existence of the Curie point in the presence of a static magnetic field . . . . . N. V. Shebaldin

636 (918) Mechanism of the absorption of light in intrinsic III–V semiconductors . . . . . É. P. Sinyavskiĭ, V. P. Zenchenko

638 (921) Quantum temperature–size effect in a bismuth film. . . . . F. Yu. Aliev, I. G. Kerimov, E. S. Krupnikov, F. R. Godzhaev

639 (923) Thermal conductivity of lanthanum in the region of its first phase transition . . . . . I. A. Smirnov, V. Ya. Khusnutdinova

641 (925) Quasienergy spectrum of an electron in a crystal lattice. . Yu. I. Balkarei, É. M. Épshtein

643 (927) Spectral and kinetic characteristics of x-ray luminescence centers in diamond. . . . . E. F. Martynovich, L. V. Morozhnikova, I. A. Parfianovich

645 (929) ESR of self-trapped holes in AgCl at liquid-nitrogen temperature . . . . . R. A. Zhitnikov, V. D. Lipatov, N. G. Romanov

646 (931) Density of electron states in cubic 4d metals . . . . . I. I. Geguzin, I. Ya. Nikiforov, G. I. Al'perovich

648 (933) Diffusion of lithium in potassium chloride single crystals . A. N. Murin, I. V. Murin, V. I. Portnyagin, Yu. S. Shapkina

650 (935) Nonradiative relaxation in $CaWO_4:Nd^{3+}$ . . . . . I. S. Andriesh

652 (937) Magnetic phase transition in a tetragonal antiferromagnet exhibiting very weak ferromagnetism . . . . . V. S. Kuleshov, V. A. Popov

654 (940) Anisotropy of the magnetic susceptibility of dysprosium near the Néel point. . . . . L. A. Boyarskiĭ, A. D. Rozhkovskiĭ, M. A. Starikov

656 (942) Interaction of a ferromagnet in its metastable state with a neutron beam . . . . . I. A. Akhiezer, A. I. Kalinichenko

657 (944) Two-photon photoelectric emission of electrons from metals illuminated with several monochromatic light beams . . . . . V. Kh. Kornya, M. E. Marinchuk

659 (946) Ferroelectric and antiferroelectric properties of chain structures calculated allowing for vibronic interactions . I. B. Bersuker, B. G. Vekhter, M. L. Rafalovich

661 (948) Influence of dopants on the velocity of dislocations in GaAs single crystals . . . . . V. B. Osvenskiĭ, L. P. Kholodnyi, M. G. Mil'vidskiĭ

663 (951) Effect of electric fields on the ESR of Gd^{3+} in $SrMoO_4$ . . . V. A. Vazhenin, Yu. A. Sherstkov, K. M. Zolotareva, L. V. Tryapitsyna

664 (952) Electrical properties, reflection spectrum, and conduction mechanism of aluminum dodecaboride (α AlB_{12}) . . . . . A. A. Berezin, O. A. Golikova, V. K. Zaitsev, M. M. Kazanin, V. M. Orlov, L. S. Stil'bans, É. N. Tkalenko

666 (955) Photoconductivity of pentacene crystals . . . . . Ya. I. Vertsimakha, M. V. Kurik, Yu. M. Lopatkin, L. I. Tsikora

668 (957) Exchange interaction and orbital degeneracy in a cubic crystal. . . . . L. I. Korovin, E. K. Kudinov

670 (959) Influence of the magnetic anisotropy on the conductivity of the ferrite $Cu_{0.85}Co_{0.1}Fe_{2.05}O_4$. . . . . V. L. Ivannikov, N. Z. Miryasov, V. A. Semkina, V. P. Taskaev

671 (961) Group analysis of the exciton electroabsorption spectrum and the localization of the conduction band of SiC(6H) . . . V. I. Sankin

Soviet Physics–Solid State Vol. 15, No. 4, October 1973

(Russian original: Fiz. Tverd. Tela, Vol. 15, No. 4, pp. 969–1328, April 1973)

673 (969) Model potential for the crystal lattice of metals ..... I. M. Rangelov

676 (974) Determination of the distribution of excitons in the band of CdS crystals subjected to optical pumping..... P. D. Altukhov, V. I. Revenko, V. B. Timofeev

679 (980) Energy transfer in solids ..... A. P. Bozhko, K. K. Pukhov

684 (989) Layered domain structures in thin orthoferrite plates .. E. I. Il'yashenko, V. G. Kleparskii

688 (996) Constant current in conducting media due to a high-frequency electromagnetic field..... V. I. Perel', Ya. M. Pinskii

693 (1004) Current–voltage characteristics of the field emission current from layers of germanium on tungsten ..... N. V. Mileshkina, P. G. Shlyakhtenko, N. I. D'yakonova

695 (1007) Temperature variation of the orientation of a Dy^{3+} impurity spin in a gadolinium single crystal..... V. G. Stankevich, I. I. Lukashevich, N. I. Filippov

697 (1011) Quantum transport equation for fluctuations in nonequilibrium electron–phonon systems..... P. M. Tomchuk, A. A. Chumak

702 (1019) Raman scattering of light in semiconductors with nonspherical bands..... A. G. Zhilich

706 (1026) Nonlinear theory of ultrasound amplification in a semiconductor in a magnetic field..... Yu. G. Bachinin, Yu. V. Gulyaev

712 (1036) Faraday effect in cubic crystals of the sillenite type ... V. I. Burkov, Yu. I. Krasilov, N. L. Kozlova, V. M. Skorikov, G. M. Safronov, V. N. Batog

714 (1039) Relationship between disorientation of blocks and the resistance to fracture of NaCl crystals ..... V. I. Betekhtin, A. N. Bakhtibaev, A. Zaripov, S. A. Ivanov

718 (1046) Certain aspects of light diffraction by a domain structure ..... V. I. Shcheglov

721 (1050) NMR in the antiferromagnets $CoCl_2$ and $NiCl_2$ ..... F. V. Bragin, S. M. Ryabchenko

726 (1058) Local magnetic fields at iron nuclei in YIG induced by external magnetic field..... Sh. Sh. Bashkirov, N. G. Ivoilov, A. A. Monakhov, V. A. Chistyakov

728 (1062) Some features of defect transport in pure and doped calcium fluoride ..... B. M. Mogilevskii, V. N. Romanov, V. M. Reiterov, L. M. Trofimova, A. F. Chudnovskii

732 (1070) Superconductivity of Nb and Ta at pressures up to 250 kbar ..... I. V. Berman, N. B. Brandt, O. A. Zarubina, A. L. Karuzskii

735 (1075) Quantum theory of spectral distribution of isolated nonlinear vibration modes near the combination frequency..... M. I. Dykman

738 (1080) Nonlinear polarizability of diatomic sphalerite lattices.. Yu. V. Shaldin

740 (1084) Electronic structure of a donor–vacancy complex in a crystal of the diamond type ..... V. A. Telezhkin, K. B. Tolpygo

743 (1090) Role of absorbing inclusions in the optical breakdown of transparent media..... S. I. Anisimov, B. I. Makshantsev

746 (1096) Superconductivity and structure of Ti–Ng alloys subjected to hydrostatic pressures up to 120 kbar .... N. S. Afonikova, V. F. Degtyareva, Yu. A. Litvin, A. G. Rabin'kin, Yu. A. Skakov

750 (1102) Group and successive binary collisons in the scattering of Cs^+ ions by a tungsten single crystal..... V. I. Veksler, V. V. Evstifeev

753 (1106) Impact ionization of deep centers in an intense electric field ..... S. F. Timashev

757 (1113) Effects of magnetic anisotropy on the resonance frequency of uniaxial ferromagnets..... L. G. Onoprienko, O. I. Shiryaeva, Ya. S. Shur

760 (1118) Surface vibrations in an anisotropic crystal..... V. V. Bryksin, D. N. Mirlin, I. I. Reshina

765 (1127) Dynamic susceptibility of ferromagnetic metals ..... E. V. Kuz'min, V. A. Diskovskii

768 (1132) Surface vibrations in $A^{III}B^{V}$ semiconducting crystals... T. N. Nikolaeva

770 (1136) Effect of dislocations on the infrared absorption spectra of silicon ..... V. I. Vettegren', E. G. Kuzminov, V. V. Baptizmanskii, I. I. Novak

773 (1141) Theory of fluctuons in a ferromagnet..... N. A. Krivoglaz

779 (1152) Paramagnetic resonance and spin–lattice relaxation of Cr^{3+} ions in $CaWO_4$ single crystals ..... R. Yu. Abdulsabirov, M. M. Zaripov, I. N. Kurkin, E. A. Tsvetkov, V. I. Shlenkin
782 (1157) Quadrupole spin echo for a large-asymmetry parameter. V. S. Grechishkin
784 (1159) Mobility of dislocations in crystals with pinning centers . V. M. Chernov
789 (1167) Instability of large uniform oscillations of the magnetization of antiferromagnets..... B. A. Ivanov
794 (1174) Differential spectrum of indirect transitions in crossed electric and magnetic fields in germanium ..... V. I. Zemskii, I. V. Mochan
798 (1181) Green's function of a film in the approximation of tightly bound electrons ..... R. S. Gordenko, I. D. Mikhailov
802 (1187) Phase relaxation of hydrogen atoms stabilized in an amorphous matrix ..... A. D. Milov, K. M. Salikhov, Yu. D. Tsvetkov
807 (1196) Theory of insulator solid solutions ..... R. O. Zaitsev
813 (1206) Derivation of the infrared permittivity spectrum from Raman scattering spectra ..... M. V. Belousov
817 (1213) Theory of relaxation processes in superconductors .... V. G. Bar'yakhtar, V. F. Klepikov, V. P. Seminozhenko
823 (1223) Static displacements of atoms in the CdTe structure.... A. A. Vaipolin
826 (1228) Effect of orbital degeneracy on the magnetic ordering in narrow-band semiconductors ..... L. I. Korovin, E. K. Kudinov

BRIEF COMMUNICATIONS

830 (1235) Formation of microscopic cracks during deformation of NaCl ..... W. Schmidt, V. I. Betekhtin
832 (1237) Effect of uniaxial mechanical stress on the domain structure of orthorhombic $BaTiO_3$ single crystals .... E. V. Sinyakov, S. A. Flerova, V. N. Arkhipov
833 (1239) Effect of one-dimensional mechanical stress on the induced phase transition in a $BaTiO_3$ ceramic ..... E. V. Sinyakov, S. A. Flerova, A. I. Gavrilishina, E. A. Astrelina
834 (1241) Ferroelectric ordering in a system of impurity molecules in an ionic crystal ..... R. V. Saburova
836 (1243) Acoustic instabilities in semiconductors in a high-frequency electric field ..... V. M. Levin, L. A. Chernozatonskii
838 (1245) Effect of the spatial distribution of spherical particles on the diffuse scattering of x rays ..... A. V. Dobromyslov, V. V. Glebov
840 (1247) Stripe structure and magnetooptical diffraction in the orthoferrites ..... M. V. Chetkin, Yu. S. Didosyan
842 (1250) Dielectric spectrum of triglycine sulfate ..... Yu. M. Poplavko, L. P. Pereverzeva, V. V. Meriakri, E. F. Ushatkin, S. V. Ogurtsov, P. I. Yashchishin
844 (1252) Anomalous temperature dependence of the susceptibility and structural transitions in compounds with high superconducting transition temperatures T_c ..... B. N. Kodess
846 (1254) Electrical properties of some solid solutions of 3d transition metal silicides..... E. N. Nikitin, V. I. Tarasov, V. K. Zaitsev
848 (1256) Paramagnetism of Nd, Sm, and Eu orthotantalates ..... S. V. Smirnov, F. A. Rozhdestvenskii, Yu. N. Makurin, E. I. Krylov
849 (1258) Effect of temperature on the electrical and microwave properties of superconducting point contacts..... V. N. Gubankov, N. M. Margolin, A. B. Filimonov
851 (1260) Knight shift in cadmium alloys ..... I. V. Svechkarev, V. V. Zhukov, G. M. Zhuk
853 (1263) Comments on the Lüders-band model..... E. F. Sidokhin, V. G. Kurdyumov, L. M. Utevskii
854 (1264) Polarization of nuclear spins by hot electrons at spin–magnetophonon resonance ..... V. P. Kalashnikov, V. V. Karyagin
856 (1266) Characteristic electron energy losses during oxidation of aluminum films ..... E. A. Bakulin, L. A. Balabanov, M. M. Bredov, E. V. Stepin
858 (1268) Spin-correlation features in rare-earth metals close to the Néel point ..... L. A. Boyarskii, M. A. Starikov
860 (1270) Multiparticle character of molecular crystal luminescence..... F. B. Slobodskoi, E. F. Sheka
862 (1272) Interaction between F electrons and impurity complexes in potassium chloride crystals ..... Ya. N. Pershits, V. N. Shonin
864 (1275) Radiationless relaxation from the $^4T_2$ state in ruby at 4.2°K ..... I. Ya. Gerlovin, V. V. Ovsyankin, N. A. Tolstoi

866 (1277) Possible mechanism for acoustoelectronic nonlinearities in solids . . . . . Yu. V. Gulyaev
867 (1278) Optical, magnetooptical, and ESR studies of KCl crystals containing quasimetallic centers . . . . . A. E. Glauberman, V. V. Golubtsov, A. B. Gol'denberg
869 (1281) Kinetic properties of rhenium at high temperatures . . . . V. E. Zinov'ev, S. I. Masharov, P. V. Gel'd
871 (1284) Magnetocaloric effect an iron carbonate antiferromagnet. Yu. G. Litvinenko, V. V. Eremenko, V. I. Myatlik
873 (1286) X-ray spectrum and band structure of BP crystals. . . . . V. A. Fomichev
875 (1289) Magnetic susceptibility and superconductivity of solid solutions of niobium and tungsten monocarbides. . . . . L. B. Dubrovskaya, A. G. Rabin'kin
877 (1291) Investigation of radiation defects in semiconductor compounds of tellurium by the Mössbauer effect . . . . . É. P. Savin, P. P. Seregin
879 (1294) Infrared spectrum of $NaAg(NO_2)_2$. . . . . L. M. Rabkin, A. A. Chubich, L. T. Latush
880 (1295) Thermal-diffusion mechanism for a change in pore volume in crystalline solids . . . . . Ya. E. Geguzin, V. S. Kruzhanov
882 (1297) High-temperature damping in nickel filamentary crystals. V. P. Zubekhin, V. S. Turbin
884 (1299) Amplification of sound in a strong electric field. . . . . Yu. M. Gal'perin, A. Pardaev
886 (1302) Temperature dependence of the lattice reflection in gallium antimonide . . . . . I. V. Skryabinskii, Yu. I. Ukhanov
888 (1304) Theory of stationary acoustoelectron waves . . . . . Z. F. Krasil'nik
890 (1307) Effect of a paraexciton level on the temperature dependence of exciton luminescence in a cuprous oxide crystal . . . . . F. I. Kreingol'd, V. L. Makarov
891 (1309) Effect of exciton–exciton collisions on the exciton absorption and luminescence bands . . . . . A. V. Lelyakov
893 (1312) Superconductivity of mercury in zeolites having a three-dimensional channel network . . . . . V. N. Bogomolov
894 (1312) $N_{4,5}$ x-ray emission spectra of praseodymium, neodymium, samarium, and europium . . . . . S. A. Gribovskii, V. A. Fomichev, T. M. Zimkina
896 (1315) Size effect for bismuth films in a magnetic field . . . . . V. V. Andrievskii, Yu. F. Komnik
898 (1317) Relaxation of the nuclei of paramagnetic ions in the case of a strong electron–phonon interaction. . . . . M. P. Vaisfel'd
899 (1319) Anti-Stokes luminescence of ruby during excitation by a helium–neon laser . . . . . A. Ya. Ryskin, Z. M. Khashkhozhev
901 (1321) Mechanical characteristics of filamentary crystals of aluminum nitride . . . . . F. N. Tavadze, G. G. Surmava, A. A. Nikolaishvili, S. E. Makovets
903 (1323) Electron energy distribution in field emission from a titanium layer on tungsten . . . . . N. V. Mileshkina, V. M. Ushakov

Soviet Physics – Solid State Vol. 15, No. 5, November 1973

(Russian original: Fiz. Tverd. Tela, Vol. 15, No. 5, pp. 1329-1656, May 1973)

905 (1329) Study of phase transitions by Mössbauer spectroscopy. I. G. Gusakovskaya, T. I. Larkina

909 (1336) Magnetic properties of symmetric triads ..... V. A. Gaponenko, M. V. Eremin, Yu. V. Yablokov

914 (1345) Trigonal "fluorine" centers formed by Er^{3+} ions in fluorite-type single crystals ..... I. B. Aizenberg, M. P. Davydova, B. Z. Malkin, A. I. Smirnov, A. L. Stolov

919 (1353) Investigation of the structure of magnetic domains in nickel with the aid of monochromatic polarized neutrons ..... V. A. Trunov, R. P. Dmitriev, V. A. Ul'yanov

923 (1360) Relaxation effects in field emission of electrons from silicon ..... G. N. Fursei, N. V. Egorov, S. P. Manokhin, M. K. El Nimr

925 (1364) Critical current in narrow superconducting links ..... A. F. Volkov

928 (1369) Photoelectric emission from metal films ..... A. M. Brodskii, A. V. Tsarevskii

930 (1373) Quantum transport equation and change of the impact ionization threshold due to illumination. ..... V. N. Strekalov

933 (1378) Twinned layers in germanium and silicon and their behavior on heating ..... G. I. Dolivo-Dobrovol'skaya, V. V. Zhdanova, V. P. Sergeev

936 (1383) Anisotropy of the nonlinear refractive index of single crystals of gadolinium and terbium molybdates ..... Yu. V. Shaldin, D. A. Belogurov, T. M. Prokhortseva

939 (1388) Isotopic effect in RbH_2PO_4 crystals ..... B. A. Strukov, A. Baddur, V. N. Zinenko, A. V. Mishchenko, V. A. Koptsik

943 (1395) Selective etchants for lead sulfide single crystals. ..... K. Sangwal

945 (1398) Damping of longitudinal elastic waves in topaz and ruby crystals ..... M. A. Grigor'ev, B. D. Zaitsev, G. I. Pylaeva, V. N. Shevchik

947 (1401) Spin–lattice relaxation in $BaTiO_3$ single crystal near the ferroelectric transition point ..... V. V. Shapkin, B. A. Gromov, G. T. Petrov, Ya. G. Girshberg, É. V. Bursian

949 (1404) Thermodynamic properties of ferroelectrics having a potassium–tungsten–type tetragonal structure .... V. A. Isupov

953 (1410) Inhomogeneous oscillation modes of domain magnetization in a crystal of magnetoplumbite in the absence of an external field ..... M. A. Sigal

955 (1414) Temperature dependence of thermoelectric power in antiferromagnetic metals near the Néel temperature .. Sh. Sh. Abel'skii

957 (1417) True stresses on the interatomic bonds in loaded polymers determined by infrared spectroscopy ..... V. I. Vettegren', I. I. Novak

961 (1423) Percolation level in a two-dimensional random potential ..... A. S. Skal, B. I. Shklovskii, A. L. Éfros

963 (1427) Crystallochemical mechanism of the influence of oxygen and of the thickness of a single-crystal PbS film on the change of its type of conduction ..... L. S. Palatnik, L. G. Petrenko, Yu. A. Volkov

965 (1430) Specific structure defects in $A^{II}B^{IV}C_2^V$ compounds .... A. A. Vaipolin

969 (1436) High-density forms of fluorite and rutile. ..... L. V. Al'tshuler, M. A. Podurets, G. V. Simakov, R. F. Trunin

972 (1441) Theory of the transformation of electromagnetic waves into acoustic waves in thin metallic films. ..... G. P. Ivanovski, M. I. Kaganov, V. B. Fiks

977 (1450) Radioelectric effect in static magnetic fields ..... Ya. M. Pinskii

982 (1458) Two-stage drag of electrons by phonons and exponentially high thermoelectric power ..... V. A. Kozlov, N. S. Lidorenko, É. L. Nagaev

988 (1468) Excitation of acoustic oscillations in superconducting films ..... A. A. Golub

991 (1473) Permittivity spectrum of lithium niobate. ..... Yu. M. Poplavko, V. V. Meriakri, V. N. Aleshechkin, V. G. Tsykalov, E. F. Ushatkin, A. S. Knyazev

 Copyright © 1973 American Institute of Physics

993 (1477) Magnetic phase diagram of solid solutions in the $(V_{1-x}Cr_x)_2O_3$ system . . . . . V. N. Novikov, B. A. Tallerchik, B. A. Shustrov
996 (1481) Thermionic emission of alkaline-earth metal oxides with high densities of localized states at the crystal surface . . . . . B. P. Nikonov
1001 (1489) Creation of electrons and holes by microwave fields in semimetals similar to bismuth . . . . . I. L. Beinikhes, Sh. M. Kogan
1003 (1494) Width of the ferromagnetic resonance curve in crystals with ordered dislocation structures . . . . . A. V. Pets, E. F. Kondrat'ev
1007 (1501) Interaction of sound with moving domain walls in ferroelectrics . . . . . B. D. Laikhtman
1011 (1508) Electrotransport of copper in GaSb . . . . . A. I. Vlashku, I. I. Burdiyan, T. D. Dzhafarov
1014 (1512) Influence of hydrostatic pressure on the thermal conductivity of tellurium . . . . . Kh. I. Amirkhanov, Ya. B. Magomeddov, S. N. Émirov
1016 (1516) Binding energy of indirect excitons in crystals of the diamond and sphalerite types . . . . . S. M. Zubkova, K. B. Tolpygo
1019 (1520) Paramagnetic centers formed on the mechanical fracture and the irradiation of alkali phosphate glasses . . . . . K. A. Akhmed-sade, V. A. Zakrevskii, D. M. Yudin
1022 (1525) Electrooptical effect in ferroelectric semiconductor SbSI . . . . . A. A. Berezhnoi, A. M. Mamedov
1024 (1529) X-ray diffraction contrast from second-phase precipitates . . . . . S. S. Gorelik, V. A. Mironenko, B. N. Ushkov
1026 (1532) Electron–hole liquid in semiconductors in magnetic fields . . . . . L. V. Keldysh, A. P. Silin
1028 (1536) Sound generation by charged particles. Sound generation by A ⊖ flare . . . . . I. M. Kaganova, M. I. Kaganov
1033 (1544) States of negative triply charged substitutional impurity atoms of group IB elements in Si and Ge. . . . L. S. Kogan, K. B. Tolpygo
1038 (1551) Transition radiation and optical properties of substances in the vacuum untraviolet region . . . . . K. A. Ispiryan, S. T. Kazandzhyan
1041 (1556) Spin–wave relaxation in antiferromagnets. . . . . V. A. Kolganov
1043 (1559) Structure of the melting curve of polyurethane crystallites . . . . . I. V. Sochava
1047 (1566) Spin relaxation of free carriers in a noncentrosymmetric semiconductor in a longitudinal magnetic field . . . . . E. L. Ivchenko
1050 (1571) Effect of packing density on atomic displacement cascades . . . . . A. S. Dolgov
1052 (1574) Photon multiplication in KCl and NaCl crystals . . . . . S. N. Ivanov, É. R. Il'mas, Ch. B. Lushchik, V. V. Mikhailin
1055 (1579) Temperature and time dependences of the electrical and mechanical strength of polymer films . . . . . M. A. Bagirov, Ya. G. Ragimov, T. F. Abbasov, S. A. Abasov
1058 (1585) Quasisurface magnons in heavily doped ferromagnetic semiconductors . . . . . V. E. Zil'bervarg and É. L. Nagaev
1060 (1588) Orientation effects in the passage of charged particles across a two-dimensional lattice of atomic chains in a crystal . . . . . V. V. Beloshitskii, M. A. Kumakhov

BRIEF COMMUNICATIONS

1063 (1593) Influence of temperature and conductivity on the elastic and piezoelectric properties of CdSe with the wurtzite structure . . . . . E. F. Tokarev, G. S. Pado, L. A. Chernozatonskii, V. V. Drachev
1065 (1596) Parametric acoustoplasma resonance in piezoelectric semiconductors . . . . . V. M. Levin, L. A. Chernozatonskii
1066 (1597) Influence of the degree of imperfection of substrates on the structure of epitaxial films of gallium arsenide. Yu. N. Kuznetsov, T. I. Markova, T. I. Ol'khovikova, F. R. Khashimov
1068 (1599) Nonthermal discontinuity in the current–voltage characteristic of a thin superconducting film . . . . . N. I. Eru, S. A. Peskovatskii, A. V. Poladich

1070 (1601) Change in the sign of the Hall coefficient in strong electric fields . . . . . M. M. Mazur, Yu. P. Mukhortov, V. I. Pustovoit

1072 (1603) Influence of impurities on a ferroelectric system with a displacive transition . . . . . L. A. Zaitseva

1074 (1605) Electron spin resonance and spin–lattice relaxation of Mn^{6+} in K_2SO_4 . . . . . R. Yu. Abdulsabirov, T. B. Bogatova, Yu. S. Greznev, M. M. Zaripov, Yu. K. Chirkin

1076 (1607) Cylindrical magnetic domains in single crystals of noncubic bismuth–calcium–vanadium iron garnets . . . Yu. M. Yakovlev, V. S. Filonich, M. M. Klyuchnikov, Yu. L. Sapozhnikov

1078 (1610) Magnetic structure of $LaVO_3$ . . . . . V. G. Zubkov, G. V. Bazuev, V. A. Perelyaev, G. P. Shveikin

1080 (1612) Temperature dependences of the phonon thermal conductivity of Ge, Si, and III–V compounds at high temperatures . . . . . Yu. A. Logachev, L. N. Vasil'ev

1082 (1614) Energy of zinc grain boundaries and of zinc–gas interfaces . . . . . A. V. Antonov, L. S. Shvindlerman

1084 (1616) Slow surface electromagnetic waves in InSb . . . . . V. I. Baibakov, V. N. Datsko

1086 (1617) Electron–photon interaction in field emission . . . . . P. M. Tomchuk, N. N. Ivanov

1088 (1620) Differential luminescence spectra . . . . . V. I. Budyanskii, D. S. Lepsveridze, E. A. Sal'kov, G. A. Shepel'skii

1090 (1622) Electron spin resonance of Eu^{2+} ions in KBr . . . . . V. M. Maevskii, E. N. Kalabukhova

1092 (1623) Quadrupole interaction in lead hafnate in an external electric field . . . . . V. A. Klyucharev, V. P. Bozhko, A. P. Gaidamaka, V. V. Zakurkin

1093 (1625) Nuclear magnetic resonance spectra of Fe^{57} in magnetite in the region of a magnetic phase transition . . . . . N. M. Kovtun, A. A. Shemyakov

1095 (1627) Simultaneous influence of the elastic deformation and electric field on the flow stress of lithium fluoride crystals . . . . . L. B. Zuev, O. K. Tsarev, S. L. Lapteva, L. P. Laricheva

1097 (1629) $N_{IV,V}$ x-ray emission spectra of gadolinium, terbium, dysprosium, and holmium . . . . . T. M. Zimkina, V. A. Fomichev, S. A. Gribovskii

1099 (1631) Thermal expansion of NiS . . . . . N. G. Aliev, L. M. Valiev, I. G. Kerimov, A. G. Rustamov, S. Kh. Babaev, M. M. Kurbanov

1100 (1633) Oriented crystallization of CdS . . . . . L. L. Aksenova, G. I. Distler, A. V. Kovda, E. I. Kortukova

1101 (1635) Self-localized state of carriers in an antiferromagnetic semiconductor subjected to a magnetic field . . . . . G. L. Lazarev, É. L. Nagaev

1102 (1636) Dynamic dielectric nonlinearity coefficient of strontium titanate . . . . . O. G. Vendik, A. B. Kozyrev

1104 (1638) Influence of natural elastic vibrations of a disk on its magnetoacoustic resonance characteristics . . . . . V. D. Burkov, A. V. Vashkovskii

1105 (1640) Structure of the impurity absorption in n-type α-SiC(6H) . . . . . A. A. Kolesnikov, E. A. Makarov, G. N. Guk

1106 (1641) Adsorption of sodium on the (112) face of tungsten . . . . V. K. Medvedev, T. P. Smereka

1108 (1643) Electrical conductivity of liquid selenium in the infrared frequency range . . . . . A. A. Andreev, A. L. Manukyan, A. B. Pevtsov

1109 (1645) Hall effect in molten Te–Se, As_2Te_3–As_2Se_3, and In–Te systems . . . . . A. A. Andreev, T. Turgunov

1110 (1646) Electrical conductivity and dielectric properties of fine-grained films composed of oxidized aluminum particles . . . . . Yu. I. Petrov, V. A. Kotel'nikov

1112 (1648) Use of the diffraction contrast of radia displacements in the determination of the type of dislocation loop . . . I. A. Ragimov and V. N. Rozhanskii

Soviet Physics—Solid State Vol. 15, No. 6, December 1973

(Russian original: Fiz. Tverd. Tela, Vol. 15, No. 6, pp. 1657-1952, June 1973)

1115 (1657) Electrothermal transport in tungsten ..... I. V. Zakurdaev, A. D. Tsyganov

1117 (1661) Theory of thermodynamic fluctuations near a nonequilibrium steady state in spin systems ..... L. L. Buishvili, G. B. Chankotadze

1119 (1665) Tensor nature of the Hall effect in metallic ferromagnets ..... E. P. Svirina, Yu. V. Nemchinov, S. S. Karneeva

1121 (1668) Blocking effect in the scattering of fast charged particles in thin single crystals ..... N. P. Kalashnikov, É. A. Koptelov

1124 (1674) Atomic quadrupole deformation in the lattice dynamics of solid rare gases ..... O. N. Bolonin, K. B. Tolpygo

1129 (1682) Influence of the proton dynamics on the Raman spectra of Rb $(D_xH_{1-x})_2PO_4$ ..... B. N. Mavrin, Kh. E. Sterin, A. V. Bobrov, L. N. Rashkovich, A. V. Mishchenko

1133 (1688) Temperature dependence of the intensity of the second optical harmonic generated in barium titanate ..... V. S. Gorelik, O. P. Maksimov, G. G. Mitin, M. M. Sushchinskii

1136 (1693) Quantum theory of the permittivity of hot electrons. ... F. T. Vas'ko

1138 (1697) Experimental investigation of the optical phonons in lead monoxide by the tunnel spectroscopy method .... N. I. Bogatina, I. K. Yanson, A. G. Batrak

1142 (1704) Resonance effects in ferromagnetic films in the neighborhood of nuclear and ferromagnetic resonances ..... M. N. Botvinko, M. A. Ivanov

1147 (1712) Heating of electrons in gallium arsenide and indium phosphide at low temperatures ..... O. V. Emel'yanenko, D. N. Nasledov, D. D. Nedeoglo

1151 (1718) Collective radiative recombination of excitons ..... P. I. Khadzhi

1157 (1728) Temperature dependence of the magnetization of nickel. M. S. Legkostupov

1161 (1734) Effect of impurities on the tunneling of electrons ..... Yu. M. Ivanchenko, E. V. Kochergin, Yu. V. Medvedev

1166 (1742) Dislocation theory of martensitic (diffusionless) transitions ..... V. A. Solov'ev

1172 (1752) Study of the photoplastic effect at α and β dislocations in CdS ..... Yu. A. Osip'yan, V. F. Petrenko, G. K. Strukova

1175 (1757) Temperature dependences of the elastic constants of gallium arsenide ..... Yu. A. Burenkov, Yu. M. Burdukov, S. Yu. Davydov, S. P. Nikanorov

1178 (1762) Thermal conductivity of metals containing vacancies and interstitial impurity atoms ..... A. M. Ermolaev

1180 (1765) Conduction electron states in systems with strong spin—electron interaction ..... M. A. Krivoglaz

1186 (1776) Stimulated emission of γ rays from crystals ..... V. V. Kokorin, V. F. Los'

1189 (1781) Reflection spectra of quasione-dimensional crystals of $K_2Pt(CN)_4Br_{0.32} \cdot 2.3\ H_2O$ in the plasma edge region. .. L. S. Agroskin, R. M. Vlasova, A. I. Gutman, R. N. Lyubovskaya, G. V. Papayan, L. P. Rautian, L. D. Rozenshtein

1192 (1785) Some features of recrystallization of locally deformed sodium chloride single crystals ..... Ch. V. Kopetskii, N. M. Nadgornaya

1195 (1789) Effect of cross-relaxation transitions on the shape of the electron spin—echo signal decay ..... V. V. Pomortsev, G. M. Zhidomirov

1200 (1798) Dependences of the magnetic moment and Curie temperature on the composition of mixed iron garnets. S. F. Dubinin, S. K. Sidorov

1204 (1804) Growth kinetics of nuclei in thin films on inhomogeneous substrates ..... Gl. S. Zhdanov

1207 (1809) Nonradiative recombination at deep levels in the field of a strong electromagnetic wave in semiconductors .. V. A. Kovarskii, N. F. Perel'man, É. P. Sinyavskii

1210 (1814) Mössbauer effect in deformed polycrystalline samples of $AgCl:Sn^{119}$ ..... V. A. Lagunov, V. I. Polozenko

1213 (1820) Absorption spectra of acceptor—exciton complexes in α SiC(6H) ..... I. S. Gorban', A. P. Krokhmal'

 Copyright © 1973 American Institute of Physics

1215 (1822) Reflection of light by crystals in the vicinity of anisotropic exciton transitions under spatial dispersion conditions. . . . . S. A. Permogorov, A. V. Sel'kin, V. V. Travnikov
1220 (1830) Dynamics of electron–nuclear double resonance in the case of inhomogeneously broadened ESR lines with limited cross-relaxation . . . . . A. B. Brik, N. P. Baran, S. S. Ishchenko, L. A. Shul'man
1224 (1835) Coalescence in collisions of foreign particles on the surface of a crystal. . . . . Ya. E. Geguzin, V. V. Kalinin
1226 (1838) Phonon spectrum and kinetic phenomena in extrinsic ferroelectrics of the displacive type. . . . . D. E. Khmel'nitskii, V. L. Shneerson
1231 (1846) Influence of the surface scattering on the quantum size effect . . . . . G. A. Sorokin
1234 (1851) Quasivolume and Rayleigh elastic surface waves in crystals . . . . . V. N. Lyubimov, D. G. Sannikov
1237 (1856) Nature of hopping conduction in β-rhombohedral boron . A. A. Berezin, O. A. Golikova, V. K. Zaitsev
1240 (1860) Impurity centers in fluorite-type crystals at high Er^{3+} concentrations . . . . . I. B. Aizenberg, M. S. Orlov, A. L. Stolov
1242 (1863) Photomagnetic and spin waves and structures in ferromagnetic crystals . . . . . I. V. Ioffe, Sh. A. Kuliev
1245 (1868) Nonlinear rotation of the plane of polarization of light in $Bi_{12}GeO_{20}$ crystals . . . . . B. Kh. Bairamov, B. P. Zakharchenya, V. V. Toporov, Z. M. Khashkhozhev
1249 (1874) Phase transitions in ferroelectric solid solutions . . . . . R. O. Zaitsev

BRIEF COMMUNICATIONS

1254 (1883) Parity of the electroacoustomagnetic effect. . . . . Yu. P. Mukhortov, V. I. Pustovoit
1255 (1884) Infrared absorption and some features of the energy structure of layered BiTeBr crystals. . . . . A. N. Borets, G. D. Puga, D. V. Chepur
1257 (1888) Nucleation in the condensation of bismuth films on NaCl crystals . . . . . V. N. Vigdorovich, G. A. Ukhlinov, D. V. Yakashvili
1259 (1891) Simulation of brittle fracture of polymers by a network model in the Monte Carlo method. . . . . A. V. Dobrodumov, A. M. El'yashevich
1261 (1893) Temperature dependence of the electrical resistivity of V_3Si . . . . . V. A. Marchenko
1263 (1895) Screening of a static field in semiconductors. . . . . V. E. Stepanov, V. Ya. Dvoretskii
1265 (1897) Magnetic structure of extremely small antiferromagnetic particles of β FeOOH . . . . . P. O. Voznyuk, V. N. Dubinin
1267 (1900) Dispersion law and analysis of critical points in the magnon spectrum of $MnCO_3$ and $FeCO_3$. . . . . N. Sh. Barkhalova, F. M. Gashimzade, Yu. M. Seidov
1269 (1901) Mechanism of the shock-wave-induced polarization of doped alkali halide crystals . . . . . Yu. I. Tyunyaev, V. N. Mineev
1271 (1905) Measurements of the shift of the $L\alpha_1$ x-ray line of dysprosium in the $BaTiO_3$–Dy_2O_3 system . . . . . A. N. Murin, Yu. P. Kostikov, A. V. Motornyi
1272 (1906) Magnetization "ripples" in single-crystal (001) iron films . . . . . V. G. Pyn'ko, V. V. Levenko, A. S. Komalov
1273 (1907) Transverse relaxation of the nuclei of rare-earth ions in some iron garnets . . . . . A. A. Petrov, M. P. Petrov, G. A. Smolenskii, N. N. Parfenova
1275 (1909) Spin Hamiltonian of the crystal field for exchange-coupled pairs of iron-group ions . . . . . R. L. Garifullina, M. M. Zaripov
1276 (1911) F-stimulated photoplastic effect in colored crystals of NaCl. . . . . G. A. Ermakov, E. V. Korovkin, Ya. M. Soifer
1278 (1913) Thermal conductivity of solid nitrogen and carbon monoxide. . . . . L. A. Koloskova, I. N. Krupskii, V. G. Manzhelii, B. Ya. Gorodilov
1280 (1915) Phonon attenuation of hypersound in Ge, Si, and InSb . . . A. A. Bulgakov, V. V. Tarakanov, A. N. Chernets
1282 (1917) Influence of slip bands on the propagation of cracks . . . V. M. Finkel', L. N. Muratova, V. P. Ivanov
1284 (1919) Influence of anion impurities on the radiation-induced change in the conductivity of potassium chloride. . . . . Ya. N. Pershits, V. A. Andrusich

1286 (1922)	Influence of ultrasonic vibrations on the dissipative properties of twin boundaries in cadmium	I. A. Gindin, O. I. Volchok, I. M. Neklyudov, V. S. Okovit
1287 (1923)	Mechanism of the electroluminescence of anthracene	A. M. Zvyagintsev, V. I. Steblin
1289 (1925)	Exoemission of electrons from sodium chloride	N. I. Konyushkina, I. V. Krylova
1291 (1928)	Vibrational spectrum of tin impurity atoms in crystalline, glassy, and finely dispersed selenium	P. P. Seregin, M. A. Sagatov, F. S. Nasredinov, L. N. Vasil'ev
1293 (1930)	Statistical investigation of the distribution of distances between nuclei on the surface of an ionic crystal	V. I. Trofimov, É. Kh. Enikeev
1295 (1933)	Depolarization of neutrons in terbium in the magnetic phase transition region	N. G. Baazov, A. G. Mandzhavidze
1297 (1935)	Paraelastic acoustic resonance of electron centers in many-valley semiconductors	V. S. Vikhnin, M. F. Deigen
1298 (1937)	Theory of the polaron effect in boron	A. A. Berezin
1300 (1939)	Symmetry of magnons and paramagnons in $MnCO_3$ and $FeCO_3$	N. Sh. Barkhalova, F. M. Gashimzade, Yu. M. Seidov
1302 (1941)	Influence of thermal stresses on the exciton spectrum of thin films of CuI	L. A. Ageev, V. K. Miloslavskii
1304 (1943)	Ferroelectric behavior of vacuum condensates of lead germanate	Yu. Ya. Tomashpol'skii, M. V. Pentegova
1305 (1945)	Orientational dependence of the formation of F centers in a NaCl single crystal	E. A. Kuleshov, É. T. Shipatov
1307 (1947)	Identification of some peaks in the spectrum of characteristic electron energy losses in tungsten	É. F. Chaikovskii, V. S. Red'kin, V. V. Zashkvara, V. T. Sotnikov

Soviet Physics – Solid State Vol. 15, No. 7, January 1974

(Russian original: Fiz. Tverd. Tela, Vol. 15, No. 7, pp. 1953–2264, July 1973)

1309 (1953) Determination of the density of phonon states for coherently scattering crystals. . . . . I. P. Eremeev, I. P. Sadikov, A. A. Chernyshov

1315 (1963) Spin-wave spectrum of a uniaxial ferromagnet in an external magnetic field . . . . . I. G. Gochev, V. M. Tsukernik

1319 (1969) Dynamic orientation of electrons in semiconductors in the field of a strong electromagnetic wave. . . . . A. A. Kokin, I. V. Popovkin

1322 (1975) Effect of γ radiation on Er^{3+} and Yb^{3+} centers in fluorite . . . . . L. S. Kornienko, A. O. Rybaltovskii

1327 (1984) Spectrum and damping of spin waves in antiferromagnets with a helical structure . . . . . Yu. T. Emel'yanov, N. F. Balakhonov, L. V. Kurbatov, M. P. Kashchenko

1332 (1993) Dynamic nuclear polarization by ultrasound and the excitation of acoustically forbidden transitions. . . . . L. N. Fershtat, V. A. Shutilov, G. L. Antokol'skii

1337 (2001) Theory of stimulated plasmon generation . . . . . V. F. Los'

1341 (2008) Electron spin resonance of dipole-coupled ion pairs in orthorhombic potassium–yttrium molybdate . . . . . A. M. Pshisukha, A. I. Zvyagin

1344 (2013) Structural phase transitions and orbital magnetism in crystals containing Jahn–Teller ions. . . . . B. G. Vekhter, M. D. Kaplan

1347 (2018) Phase transitions in CsH_2AsO_4 and CsD_2AsO_4 crystals . B. A. Strukov, A. Baddur, V. I. Zinenko, V. K. Mikhailov, V. A. Koptsik

1351 (2024) Effective screening of the short-range exchange interaction in excitons . . . . . V. A. Kiselev, A. G. Zhilich

1354 (2029) Metallic inclusions in synthetic polycrystalline diamond . . . . . L. S. Palatnik, L. I. Gladkikh, M. Ya. Fuks, Z. I. Shvetsova

1359 (2037) Vibration spectrum of a monatomic surface film . . . . . A. S. Dolgov

1362 (2042) Theory of ESR spectra of triplet molecular excitons. . . V. I. Sugakov

1365 (2048) Origin of the noncentral positions of impurity ions in lattices . . . . . M. D. Glinchuk, M. F. Deigen, A. A. Karmazin

1368 (2053) Plasma reflection in bismuth and bismuth–antimony alloys . . . . . V. D. Kulakovskii, V. D. Egorov

1372 (2060) Interaction of waves in bounded plasma. . . . . Yu. F. Filippov

1376 (2066) Amplification of sound by high-frequency fields in quantizing magnetic fields . . . . . Yu. I. Balkarei, É. M. Épshtein

1379 (2071) Atomic mechanism for the destruction of stressed polymers. . . . . S. N. Zhurkov, V. E. Korsukov

1385 (2081) Theory of orientational vibrations of molecules in a molecular crystal . . . . . L. G. Zhidkov, A. G. Tret'yakov

1389 (2088) Fluctuations and differential conductivity of hot electrons near the cyclotron resonance. . . . . N. G. Ustinov

1392 (2092) X-ray spectroscopic study of some refractory transition metal compounds . . . . . A. S. Shulakov, T. M. Zimkina, V. A. Fomichev, É. Z. Kurmaev

1396 (2098) Influence of illumination on the kinetics of thermal decomposition and the composition of CdS crystal in vacuo . . . . . G. Ya. Pikus, V. P. Teterya

1400 (2104) Electron thermal conductivity of superconductors. . . . . B. T. Geilikman, V. G. Orlov

1404 (2110) Magnetostriction of manganese arsenide and chromium telluride . . . . . A. M. Burkhanov, I. G. Fakidov

1407 (2114) Effect of spectral migration on the shape of inhomogeneously broadened luminescence lines . . . . . A. G. Kofman, A. I. Burshtein

1410 (2119) Cerenkov emission of sound by a particle moving in metal . . . . . I. M. Kaganova, M. I. Kaganov

1414 (2126) Self-focusing of electromagnetic waves in semiconductor plasma. . . . . F. G. Bass, V. A. Pogrebnyak

1420 (2136) Theory of infrared absorption by free carriers . . . . . I. G. Lang

1424 (2143) Intensity contrast from screw dislocations lying in a reflecting plane . . . . . L. N. Danil'chuk

Copyright © 1974 American Institute of Physics

1426 (2146) Zeeman effect in the lines of the tetragonal Gd^{3+} centers in a crystal of SrF_2 . . . . . É. Kh. Ivoilova, B. N. Kazakov, A. M. Leushin, A. L. Stolov

1429 (2151) Study of the magnetic structure of hematite . . . . . R. P. Ozerov, A. A. Yakovlev, S. Nizel, V. V. Nitts

1431 (2155) Lorentz and local fields in electron–nuclear double resonance . . . . . V. G. Grachev, M. F. Deigen, S. I. Pekar

1433 (2158) Parametric amplification of sound in piezoelectric insulators by a beam of charged particles . . . . . F. G. Bass, O. A. Gredeskul, S. A. Gredeskul

1437 (2164) Damage to high-strength glass in microindentation . . . . L. G. Baikova, V. P. Pukh, S. N. Talalakin

1440 (2169) Exchange-coupled Mn^{2+} ion pairs in CaF_2 and SrF_2 . . . . R. L. Garifullina, V. G. Stepanov

BRIEF COMMUNICATIONS

1443 (2173) Influence of light on the parametric excitation of magnetoacoustic oscillations . . . . . A. S. Bakai, G. G. Sergeeva

1445 (2175) Oscillations of the interband photomagnetic effect and photoconductivity of InSb in a magnetic field . . . . . Yu. E. Kamenev, E. M. Kuleshov, R. V. Parfen'ev

1447 (2177) ESR of trigonal Tm^{2+} centers in SrF_2 . . . . . L. S. Kornienko, A. O. Rybaltovskii

1448 (2179) Relationship between the secondary emission of electrons from GaAs and GaP crystals and the change in the electron affinity in the adsorption of cesium . . . L. F. Afonina, G. B. Stuchinskii

1450 (2181) Electrical resistance of pure gadolinium and its alloys with iron near the Curie point . . . . . O. A. Nabutovskaya

1452 (2184) Excitation of surface waves in an absorbing medium . . . F. R. Arutyunyan, A. Kh. Mkhitaryan, R. A. Oganesyan, B. O. Rostomyan

1454 (2187) Influence of chemisorption on electronic phase transitions . . . . . A. D. Gudz', L. I. Ivankiv, A. M. Pentsak, S. N. Chopko

1455 (2188) Activation mechanism of contact and bulk conductivities in thin iodine-modified organic films . . . . . V. Ya. Vodyanoi, E. L. Ivchenko, N. A. Fedorovich

1457 (2190) Nuclear gamma resonance of dysprosium-doped semiconducting barium titanate . . . . . A. N. Murin, A. V. Motornyi

1458 (2191) Magnetic moment arising in the Hall effect . . . . . Yu. P. Mukhortov

1460 (2194) Conversion of color centers in x-irradiated KCl : Tl crystals . . . . . B. D. Lobanov, I. A. Parfianovich

1461 (2195) Low-temperature phase transitions in the zirconium–hydrogen system . . . . . L. S. Topchyan, I. A. Naskidashvili, R. A. Andrievskii, V. I. Savin

1463 (2198) Electrical and electrooptic properties of stoichiometric barium–strontium niobate single crystals . . . . . V. V. Voronov, S. M. Desyatkova, L. I. Ivleva, Yu. S. Kuz'minov, L. G. Lyapunova, V. V. Osiko

1465 (2200) Plasma oscillations of valence electrons during a polymorphic transition in cobalt . . . . . E. A. Bakulin, L. A. Balabanova, M. M. Bredov, E. V. Stepin

1467 (2203) Specific heat and magnetic phase transition in $LaVO_3$ . . A. S. Borukhovich, G. V. Bazuev, G. P. Shveikin

1469 (2205) Elastic properties of iron monosilicide . . . . . G. P. Zinov'eva, L. P. Andreeva, P. V. Gel'd, R. P. Krentsis

1471 (2207) Domain structure of a large yttrium iron garnet single crystal . . . . . O. M. Benidze, A. V. Zalesskii

1473 (2210) Defect structure of twin layers in silicon iron . . . . . I. A. Gindin, V. S. Okovit, A. I. Sirota, L. A. Chirkina

1475 (2212) Some features of the temperature dependence of the electrical resistance of thin antimony films . . . . . E. I. Bukhshtab, Yu. F. Komnik, Yu. V. Nikitin

1477 (2215) Inelastic reflection of electrons from single crystals covered by disordered surface films . . . . . I. A. Abroyan, O. B. Babanina, S. L. Zaslavskii, A. I. Titov

1479 (2217) Nuclear quadrupole resonance spectra of $A^{III}B^{V}O_4$-type crystals . . . . . G. K. Semin, A. K. Moskalev, V. I. Popolitov, V. A. Egorov, V. F. Peskin

1480 (2219) Size-quantization optoelectric effect . . . . . O. I. Kartavtsev, O. A. Mezrin

1482 (2221) High plasticity of CsI single crystals at temperatures of 1.6–300°K . . . . . S. N. Komnik, S. N. Smirnov, Ya. A. Zakharin

1484 (2223) Periodic stratification of the charge density in an electronic phase transition in magnetic semiconductors Yu. I. Balkarei, V. G. Baru, A. A. Sukhanov

1486 (2225) Raman scattering of light in ZnP_2 and CdP_2 crystals . . . M. Ya. Valakh, A. V. Fedotovskii, I. I. Tychina

1488 (2228) Relaxational oscillations of the transport current in thin superconducting films . . . . . I. I. Eru, S. A. Peskovatskii, A. V. Poladich

1490 (2230) Exchange-coupled pairs of Jahn–Teller impurities in crystals . . . . . K. I. Kugel', D. I. Khomskii

1491 (2232) Possible applications of the method of cluster components to two-phase systems . . . . . B. V. Sal'nikov, Yu. P. Vorob'ev, A. N. Men'

1493 (2234) Vibronic spectra of the ferroelectric $AgNa(NO_2)_2$ . . . . . T. P. Myasnikova, L. M. Rabkin, S. V. Marisova

1495 (2236) Absorption of ultrasound in semimetals . . . . . M. B. Sultanov

1497 (2238) Structure of the long-wavelength absorption edge of $CdGeP_2$ crystals . . . . . I. S. Gorban', I. P. Zharkov, V. V. Lugovskii, I. I. Tychina, V. I. Seryi

1498 (2240) Grain-boundary internal friction . . . . . R. I. Garber, V. B. Rabukhin, V. S. Ashanin

1499 (2241) Transport properties of β lanthanum . . . . . V. E. Zinov'ev, L. P. Gel'd, V. A. Morozova, G. E. Chuprikov

1501 (2244) Some features of the spin reorientation in yttrium orthoferrite at low degrees of substitution of iron with cobalt ions . . . . . K. P. Belov, A. K. Gapeev, A. M. Kadomtseva, T. M. Ledneva, M. M. Lukina, T. L. Ovchinnikova, N. A. Khafizova

1503 (2246) X-ray $M_{II,III}$ emission bands of period I transition metals in diborides . . . . . A. S. Shulakov, I. I. Lyakhovskaya, V. A. Fomichev

1505 (2248) Spin relaxation of optically oriented electrons . . . . . V. G. Fleisher

1507 (2251) Polarization of the second shear harmonic in the propagation of an acoustic wave along a three-fold axis in crystals . . . . . K. K. Ermilin, V. A. Krasil'nikov, V. E. Lyamov, V. M. Prokhorov

1509 (2253) Influence of the molecular symmetry on the rate of magnetic relaxation of nuclei in solids . . . . . M. M. Bil'danov, M. R. Zaripov, N. K. Andreev

1511 (2255) Reflection spectra of deformed potassium and sodium halide single crystals . . . . . V. N. Vishnevskii, Z. S. Kulik, L. N. Kulik

1513 (2258) Investigation of the hydrate isomerism of the Cr^{3+} ions in an $AlCl_3 \cdot 6H_2O$ single crystal by the ESR method. . . O. F. Gatsullin, M. M. Zaripov, Yu. M. Ryzhmanov

(Russian Original: Fiz. Tverd. Tela, Vol. 15, No. 8, pp. 2265-2568, August 1973)

1515 (2265) Dispersion of the nonlinear polarization coefficient of tellurium. . . . . V. V. Berezovskii, N. A. Blinov, A. N. Remizov

1518 (2270) Gamma-magnetic resonance in the presence of fluctuating fields. . . . . I. B. Bersuker, S. A. Borshch, I. Ya. Ogurtsov

1522 (2277) Transfer of electronic excitation in a crystal. . . . . V. P. Sakun

1526 (2285) Phonon wings of the vibrational absorption bands of the HS^- impurity ion in alkali halide crystals. . . . . Yu. P. Tsyashchenko, I. P. Pinkevich, V. M. Zaporozhets

1530 (2292) Effect of one-ion anistropy on the spin-wave spectrum . V. N. Kitaev, M. P. Kashchenko, L. V. Kurbatov

1534 (2299) Influence of a longitudinal electric field on the magnetoabsorption in semiconductors with anisotropic energy bands . . . . . A. G. Zhilich

1538 (2305) Acoustic effect of charged-particle beams in metals . . . V. D. Volovik, V. T. Lazurik-É l'tsufin

1540 (2308) Dynamics of a nuclear spin system in the presence of paramagnetic centers . . . . . Yu. L. Popov, R. A. Dautov, K. S. Saikin, F. I. Bashirov

1543 (2312) Electric fields around dislocations in crystals having the wurtzite structure . . . . . I. S. Smirnova

1547 (2319) Phase transition in a system of impurity electrons in many-valley semiconductors. . . . . V. A. Kochelap, V. N. Sokolov

1550 (2323) Anion-substituting activator color centers in KCl : Ag crystals . . . . . B. D. Lobanov, É. É. Penzina, I. A. Parfianovich

1554 (2329) Some features on the spin-wave spectrum of antiferromagnetic nickel tungstate resulting from the low crystal-structure symmetry . . . . . V. L. Kut'ko

1558 (2335) Propagation of dopplerons in cadmium in an inclined magnetic field . . . . . V. V. Lavrova, V. G. Skobov, L. M. Fisher, A. S. Chernov, V. A. Yudin

1563 (2343) Carrier mobility in n-type yttrium iron garnet. . . . . Ya. M. Ksendzov, A. M. Kotel'nikova, V. V. Makarov

1565 (2347) Small-radius surface polarons in rutile . . . . . V. N. Bogomolov, V. V. Bryksin, A. A. Sitnikova, V. D. Tolmacheva, L. Kh. Émm

1570 (2356) Quantum transport equation for electrons in a size-quantized film . . . . . V. I. Puchkov

1572 (2359) Investigation of the domain structure of a liquid crystal of p-azoxyanisole by diffraction of light . . . . . I. D. Samodurova, A. S. Sonin

1574 (2363) Optical orientation of spins of free and bound electrons. . . . . R. I. Dzhioev, B. P. Zakharchenya, L. M. Kanskaya, V. G. Fleisher

1579 (2371) Vibrational spectra of rutile . . . . . A. S. Knyazev, V. P. Zakharov, I. A. Mityureva, Yu. M. Poplavko

1583 (2378) Properties of a "quadrupole" impurity center in an antiferromagnet of the easy-axis type. . . . . M. A. Ivanov, A. Ya. Fishman

1588 (2386) Photoionization of Ag^0 centers in KCl : Ag . . . . . V. S. Osminin

1592 (2393) Photoelectric properties of vanadium pentoxide single crystals . . . . . V. G. Mokerov

1595 (2397) Magnetic transitions in the manganese–rhodium system . . . . . É. A. Zavadskii, L. I. Medvedeva

1599 (2403) Photoconductivity due to impact ionization. . . . . V. N. Strekalov

1602 (2407) Cubic Eu^{2+} centers in perovskite-type crystals . . . . . N. S. Al'tshuler, É. Kh. Ivoilova, A. L. Stolov

1605 (2412) Broadening of a local level in a ferromagnet with an impurity . . . . . V. G. Bar'yakhtar, V. V. Gann, L. G. Zazunov

1610 (2421) Acoustic saturation of the nuclear magnetic resonance spectrum in lithium iodate . . . . . V. M. Sarnatskii, V. A. Shutilov

1612 (2425) Influence of the mean free path of electrons on the formation of a track around the trajectory of a charged particle in a metal. . . . . Ya. E. Geguzin, M. I. Kaganov, I. M. Lifshits

1614 (2429) Breakdown of mirror symmetry of the optical absorption and luminescence spectra . . . . . I. S. Osad'ko

Copyright © 1974 American Institute of Physics

1620 (2439) Surface electromagnetic waves in an anisotropic ferromagnetic insulator . . . . . A. V. Shitikov, N. F. Balakhonov, L. V. Kurbatov
1625 (2447) Spin–phonon interaction in ruby at low temperatures . . E. M. Ganapol'skii, D. N. Makovetskii
1630 (2454) Thermal-field ionization of electron traps in luminescent KCl:In:Na crystals . . . . . V. I. Leiman, V. P. Denks, A. É. Dudel'zak
1634 (2460) Influence of hydrostatic pressure on dislocations . . . . . V. V. Tokii, V. I. Zaitsev
1639 (2468) Propagation of nonlinear plasma waves in semiconductors obeying a nonquadratic dispersion law . . . . . L. B. Vatova
1642 (2474) Magnetooptic investigations of the spin system in a $CaF_2:Dy^{3+}$ (I) crystal . . . . . V. S. Zapasskii, P. P. Feofilov
1647 (2482) Orientational dependence of the spin–lattice relaxation times in a $CaF_2:Dy^{3+}$ (I) crystal . . . . . V. S. Zapasskii, A. F. Klimachev
1650 (2487) Kinetic paramagnetism associated with the pinch effect in an electron–hole plasma . . . . . I. I. Boiko

BRIEF COMMUNICATIONS

1653 (2492) Thermionic emission from the (111) face of a silicon single crystal . . . . . É. F. Chaikovskii, Yu. I. Ivanov, L. I. Kaisheva
1654 (2494) Bistable state of microplasmas in electric breakdown of semiconductor field-emission cathodes . . . . . P. G. Shlyakhtenko, N. V. Mileshkina, M. G. Dorotynskii
1656 (2496) Interaction of a Bloch domain boundary in a ferrite with an electromagnetic wave . . . . . G. E. Khodenkov
1657 (2497) Thermal conductivity of $TlAsS_2$ and $TlAsTe_2$ in solid and liquid states . . . . . Kh. I. Amirkhanov, G. G. Gadzhiev, Sh. M. Ismailov, Ya. B. Magomedov
1659 (2500) Temperature dependence of the activation energy of electrical conduction in As_2Se_3 . . . . . A. A. Andreev, É. A. Lebedev, E. A. Shmuratov, V. Kh. Shpunt
1660 (2502) Anisotropy of the electric polarization of the cubic paraelectric phase of perovskite ferroelectrics . . . . . V. V. Kirillov, V. A. Isupov
1662 (2504) Spin–lattice relaxation of Mo^{3+} ions in yttrium aluminum garnet single crystals . . . . . É. A. Markosyan, A. G. Petrosyan, É. G. Sharoyan
1663 (2505) Manifestation of the electron–hole interaction in the K absorption spectrum of Li in LiF . . . . . A. M.-É. Saar, A. A. Maiste, M. A. Élango
1665 (2507) Temperature-induced changes in the fundamental reflection spectra of crystals isomorphous with triglycine sulfate . . . . . Z. S. Vasilina, V. M. Varikash, I. S. Zheludev, N. A. Romanyuk
1666 (2509) Raman scattering of a strong electromagnetic wave by optical phonons . . . . . V. I. Emel'yanov
1668 (2510) Electron spin resonance spectra of Fe^{3+} ions in V_2O_3 . . V. A. Ioffe, V. S. Grunin, I. B. Patrina, Sh. Z. Krymskii
1670 (2513) Theory of electron spectra of deformed molecular crystals . . . . . V. I. Sugakov
1672 (2515) Investigation of the dielectric properties of Rochelle salt at frequencies of 1 Hz–300 GHz . . . . . Yu. M. Poplavko, V. V. Meriakri, L. P. Pereverzeva, V. N. Aleshechkin, V. I. Molchanov
1674 (2518) Mutual distribution of impurity ions and radiation defects in alkali halide crystals . . . . . B. D. Lobanov, I. A. Parfianovich, E. I. Shuraleva
1676 (2521) Influence of electronic conduction on the internal friction in polydomain ferroelectric crystals . . . . . S. K. Turkov, A. P. Kotov, V. S. Postnikov
1678 (2523) Brightness waves of x-ray radioelectroluminescence of KI:Tl . . . . . V. V. Pologrundov, E. N. Karnaukhov, V. N. Egorov
1679 (2524) Nonlinear properties of granular superconducting films. K. K. Likharev
1681 (2527) Transverse anharmonicity of chain-like crystals . . . . . D. M. Bercha, M. P. Zayachkovskii, D. Yu. Baletskii
1682 (2528) Absorption of hypersound in CdS films at 9.4 GHz. . . . . K. N. Baranskii, F. L. Vizen, Z. A. Magomedov, I. V. Palamarchuk

1684 (2531) Hall coefficient of metal-like semiconductor melts . . . . A. A. Andreev, T. Turgunov

1685 (2532) Use of the Morse potential in the determination of the electron density in silicon . . . . . Z. A. Iskanderova, A. E. Kiv

1687 (2534) Vibrational spectrum of a $PbMg_{1/3}Nb_{2/3}O_3$ crystal . . . . . A. A. Karamyan, N. N. Krainik

1689 (2537) Coupled oscillations of nuclear spins and domain walls in magnetic crystals . . . . . M. P. Petrov, V. V. Moskalev

1690 (2539) Positron annihilation in metal single crystals . . . . . L. R. Ul'pe

1692 (2541) Spectroscopic manifestation of thermally activated disordering of nitrate ions in $CsNO_3$ and $NaNO_3$ crystals . . . . . Ya. A.-Kh. Badr, S. V. Karpov, A. A. Shultin

1694 (2543) Influence of the nature of deformation on the electrical properties of $(BiSb)_2Te_3$ solid solutions. . . . . A. A. Averkin, B. M. Gol'tsman, Zh. Zh. Zhaparov, E. A. Zhemchuzhina, M. G. Komissarchik, Yu. G. Polistanskii

1695 (2545) Appearance of dislocations in a strong electric field . . . G. A. Vorob'ev, S. G. Ekhanin, M. M. Milyushina, N. S. Nesmelov

1697 (2547) Influence of twins on the electrical and galvanomagnetic properties of bismuth . . . . . G. A. Ivanov, Yu. T. Levitskii, S. V. Lankin, V. L. Naletov

1698 (2549) Exciton origin of the structure of magnetoabsorption of cuprous oxide. . . . . V. T. Agekyan, Yu. A. Stepanov, I. P. Shiryapov

1700 (2552) Magnetic resonance of V^{51} nuclei in vanadium oxide bronzes. . . . . R. N. Pletnev, V. K. Kapustkin, V. L. Volkov

1701 (2553) Bound and dissociating two-phonon states and Fermi resonance in calcite . . . . . M. V. Belousov, D. E. Pogarev, A. A. Shultin

1703 (2556) Thermal conductivity of a conductor and the drag effect in an electron–phonon system . . . . . S. T. Pavlov, B. É. Éshpulatov

1704 (2557) Mass of the hole density of states in p-type InSb deduced from galvanomagnetic measurements . . . . . P. V. Tamarin, I. G. Lang, S. T. Pavlov

1706 (2559) Frequency dependence of the fluctuation-type absorption of sound in uniaxial ferroelectrics. . . . . N. V. Shchedrina

1708 (2561) Electron spin resonance of surface centers in a silicon–germanium alloy. . . . . L. N. Aleksandrov, L. V. Ovchinnikova

1709 (2563) Changes in the fine-structure parameters of copper single crystals as a result of plastic deformation . . . . B. M. Tarakanov

(Russian original: Fiz. Tverd. Tela, Vol. 15, No. 9, pp. 2569–2864, September 1973)

1711 (2569) Electron spin resonance in some compounds of iron-group transition elements containing group VB elements. . . . . V. V. Isaev-Ivanov, N. M. Kolchanova, V. F. Masterov, D. N. Nasledov, G. N. Talalakin

1715 (2575) Elastic moduli and stability of anharmonic crystals. . . . N. M. Plakida, V. L. Aksenov

1720 (2583) Face-centered cubic lattices of alkali metals and Krasko–Gurskii model pseudopotential . . . . . V. A. Zhdanov, V. V. Dobrotvorskii

1722 (2586) Investigation of the Shaefer–Bergmannn diffraction in a lithium niobate crystal at hypersonic frequencies. . . . . S. M. Shandarov

1725 (2591) WKB method in the dynamical theory of scattering . . . . E. A. Tikhonova

1729 (2598) Relationship between structure and defects in orthoferrite single crystals. . . . . O. G. Alaverdova, A. M. Balbashov, A. Ya. Chervonenkis

1731 (2602) Dynamic properties of the surface lattices of semiconductors. . . . . B. A. Nesterenko, A. D. Borodkin, O. V. Snitko

1736 (2609) Double-frequency measurement of the phase relaxation in yttrium iron garnet . . . . . U. Kh. Kopvillem, B. P. Smolyakov, R. Z. Sharipov

1738 (2612) Allowance for relaxation effects in surface layers of semiconductors in investigations of electron emission resulting from ion bombardment . . . . . N. M. Omel'yanovskaya, S. Ya. Lebedev

1740 (2615) Theory of ESR under phonon bottleneck conditions. . . . . L. L. Buishvili, N. P. Giorgadze, A. I. Ugulava

1743 (2620) Thermal desorption of lanthanide atoms and ions from the surface of tungsten. . . . . B. K. Medvedev, N. I. Ionov, Yu. I. Belyakov

1747 (2626) Drag of conduction electrons by photons due to direct transitions between spin branches . . . . . S. B. Arifzhanov, A. M. Danishevskii

1749 (2629) Calculation of the surface energy in the pair interaction model . . . . . D. N. Vasil'kovskii, V. V. Kuporosov

1754 (2636) Tetraphosphoric radical in phosphate glasses. . . . . D. M. Yudin, A. V. Shendrik, M. L. Petrovskaya, G. P. Nikolina

1757 (2641) Effect of a strong electric field on liquid semiconductors. . . . . A. A. Andreev, E. A. Shmuratov, T. Turgunov

1759 (2644) Effect of phonon heating on the propagation of high-frequency electromagnetic waves . . . . . T. M. Gasymov, A. A. Katanov

1761 (2647) Some features of the emission of sound during a thermoelastic martensitic reaction. . . . . I. Yu. Ievlev, V. P. Melekhin, R. I. Mints, V. M. Segal'

1764 (2651) Linewidth of antiferromagnetic resonance in antiferromagnets having an "easy plane" anisotropy . . V. G. Bar'yakhtar, V. L. Sobolev

1768 (2656) Investigation of the dynamic and static distortions of complexes using gamma resonance spectroscopy . . . . V. K. Imshennik, A. M. Afanas'ev, V. I. Gol'danskii, E. F. Makarov, A. S. Plachinda, I. P. Suzdalev

1771 (2661) Spectroscopic investigations of interionic vibrations in synthetic faujasite-type zeolites. . . . . I. A. Brodskii, S. P. Zhdanov, A. E. Stanevich

1774 (2665) Influence of an elastic field of a dislocation on steady-state diffusion fluxes of point defects . . . . . I. G. Margvelashvili, Z. K. Saralidze

1777 (2669) Modeling of thermally activated motion of a dislocation across a random network of obstacles. . . . S. I. Zaitsev, É. M. Nadgornyi

1780 (2674) Electromagnetic waves near cyclotron-phonon resonance. . . . . R. Bakanas, A. Matulis

1782 (2678) Interstitial diffusion in cubic crystals . . . . . A. N. Varaksin, P. V. Volobuev, P. E. Suetin

1786 (2685) Characteristics of the 4d x-ray emission spectra of rare-earth metals in the lanthanum group . . . . . T. M. Zimkina, V. A. Fomichev, S. A. Gribovskii

1789 (2689) Calculation of the dependence of the interference absorption coefficient of x rays on the dislocation density . . . . . V. I. Ivernova, A. V. Kuznetsov

 Copyright © 1974 American Institute of Physics

1792 (2694) Analysis of the temperature dependence of the intensity of the exciton luminescence of CdS single crystals ..... V. F. Grin', E. A. Sal'kov, V. A. Khvostov
1796 (2701) Trapping of molecular excitons by impurities and singlet–triplet exciton annihilation. ..... V. M. Agranovich, E. P. Ivanova, Sh. S. Nikolaishvili
1799 (2705) Nature of precipitates formed in the diffusion of phosphorus in silicon ..... V. I. Prokhorov, L. M. Sorokin
1802 (2709) Helical dislocations in deformed magnesium single crystals. ..... F. F. Lavrent'ev, Yu. A. Pokhil
1804 (2713) High-frequency properties of ferromagnets with a domain structure. ..... V. G. Bar'yakhtar, Yu. I. Gorobets, V. F. Klepikov
1807 (2718) Plasma-electric effect in a semiconductor with a nonparabolic band structure in a strong electric field ..... V. A. Shenderovskii
1811 (2724) Theory of the optical properties of cholesteric liquid crystals. ..... V. A. Belyakov, V. D. Dmitrienko
1816 (2732) Kinetics of accumulation of microcracks and fracture of polymers ..... Yu. Ya. Gotlib, Yu. E. Svetlov
1821 (2740) Influence of channeling on the elastic scattering of nonrelativistic electrons in a single crystal ..... N. P. Kalashnikov, É. A. Koptelov
1824 (2746) Influence of biexcitons on edge absorption and luminescence ..... A. A. Gogolin
1831 (2757) Theory of the phonon bottleneck in the case of saturation of ESR wings ..... N. M. Aminov

BRIEF COMMUNICATIONS

1833 (2761) Temperature dependences of the parameters of the Mössbauer spectrum of the α-Al_2O_3–Fe_2O_3 system ... A. V. Kalyamin, B. G. Lur'e, L. A. Marshak, A. N. Murin
1834 (2762) Shadow effect in γ Fe–Ni and γ Fe–Mn alloys ..... R. I. Mints, A. A. Puzanov, V. A. Semenkin, G. Yu. Khropin, M. D. Kharchuk
1836 (2764) Maggi–Righi–Leduc effect in HgTe–ZnTe solid solutions ..... D. Kh. Amirkhanova
1838 (2766) New structure-sensitive photoelectric effect in barium titanate crystals ..... V. P. Dudkevich, I. N. Zakharchenko, E. G. Fesenko
1840 (2768) Nature of the low-temperature anomaly of palladium hydride ..... I. R. Éntin, V. A. Somenkov, Ya. S. Umanskii, A. A. Chertkov, S. Sh. Shil'shtein
1842 (2771) Ligand hyperfine structure of the ESR spectrum of Cu^{2+} in zinc tungstate. ..... V. I. Petrenko, A. D. Prokhorov, G. A. Tsintsadze
1844 (2773) Thermal conductivity of lithium fluoride in the 300–1100°K temperature range. ..... A. A. Men', A. Z. Chechel'nitskii, V. A. Sokolov, E. N. Simun
1846 (2776) Dispersion of the nonlinear refractive index of gyrotropic sillenite-type crystals. ..... Yu. V. Shaldin, D. A. Belogurov
1848 (2778) Role of plasmons in the formation of the energy spectra of secondary electrons emitted as a result of ion bombardment ..... N. M. Omel'yanovskaya, S. Ya. Lebedev
1850 (2781) Polarization properties of many-photon interband absorption of light in cubic crystals ..... E. L. Ivchenko, E. Yu. Perlin
1852 (2783) Dislocations in $BaTiO_3$ single crystals ..... Yu. V. Zabara, A. Yu. Kudzin, O. I. Fomichev
1854 (2785) Influence of the boundary conditions on the states of a positronium atom ..... L. R. Ul'pe, L. D. Shokhor
1856 (2789) Probability of recombination of a hole and an impurity electron in the fluorite lattice ..... N. E. Kask, L. S. Kornienko, G. M. Fedorov, P. V. Chernov
1858 (2791) Overhauser effect in a system of conduction electrons with nonequilibrium degrees of freedom ..... Kh. M. Bikkin, I. P. Vlakhov, V. P. Kalashnikov
1859 (2792) Changes in the electrical resistivity of quenched aluminum during annealing ..... V. V. Kirichenko, V. N. Chernikov

1861 (2794) Quantum size effect in thin layered CuI films . . . . . L. A. Ageev, V. K. Miloslavskii, I. N. Shklyarevskii

1863 (2796) Quantum efficiency of the internal photoeffect in Ge. . . . A. S. Volkov, A. A. Gutkin, G. V. Il'menkov, I. I. Novak

1864 (2797) Diffusion of sulfur and phosphorus impurity atoms to the surface of tungsten . . . . . É. F. Chaikovskii, V. T. Sotnikov

1865 (2799) Domain-wall structure of anomalous magnetic cylindrical domains . . . . . V. M. Eleonskii, N. N. Kirova

1867 (2801) Transverse magnetoresistance of filamentary cadmium crystals at T = 4.2°K . . . . . Yu. P. Gaidukov, N. P. Danilova

1869 (2804) Stratification of space charge in dielectrics irradiated with fast electrons. . . . . O. B. Evdokimov, N. P. Tubalov

1871 (2806) Relationships governing photoelectric emission of electrons from a semiconductor into a polar medium . M. D. Krotova, Yu. V. Pleskov

1873 (2808) Exchange interaction and crystal lattice of gadolinium–lanthanum alloys . . . . . A. B. Beznosov, G. S. Nikol'skii

1875 (2811) Thermal conductivity of neodymium monosulfide. . . . . V. S. Oskotskii, I. A. Smirnov, V. Ya. Khusnutdinova

1877 (2813) Temperature dependence of Young's modulus of antimony along different crystallographic directions . . P. A. Maksimyuk, A. E. Belyaev

1879 (2815) Nature of lattice defects in mercury selenide. . . . . V. E. Kreve

1880 (2817) X-ray $N_{4,5}$ emission spectra of erbium, thulium, ytterbium, and lutetium . . . . . V. A. Fomichev, S. A. Gribovskii, T. M. Zimkina

1882 (2819) Influence of illumination on an induced phase transition in SbSI crystals. . . . . M. D. Volnyanskii, A. Yu. Kudzin, A. N. Sukhinskii

1883 (2820) Magnetophonon oscillations of the transverse magnetoresistance of $Cd_{0.22}Hg_{0.78}Te$ . . . . . N. N. Berchenko, M. V. Pashkovskii

1884 (2822) Influence of a uniaxial pressure on the absorption spectrum of divacancies in silicon . . . . . T. D. Dzhafarov

1886 (2824) Observation of the energy characteristics of exciton states in ionic crystals. . . . . K. P. Aref'ev, S. A. Vorob'ev

1888 (2827) Photosensitivity of ferroelectric niobates . . . . . P. V. Ionov

1890 (2829) Pulsed polarization switching in the ferroelectric $NaNH_4SeO_4 \cdot 2H_2O$. . . . . M. P. Zaitseva, A. É. Krumin', L. I. Zherebtsova, V. G. Vlasov

1892 (2831) Spin waves in ferromagnetic films with magnetization parallel to their surface . . . . . Yu. A. Korchagin, L. V. Mikhailovskaya, R. G. Khlebopros, N. S. Chistyakov

1894 (2833) Theory of Mössbauer spectra of ferroelectrics in electric fields. . . . . A. S. Ivanov, A. V. Kolpakov, R. N. Kuz'min

1896 (2835) Raman scattering spectra of Hg_2Cl_2 and Hg_2Br_2 single crystals. . . . . Ch. Barta, A. A. Kaplyanskii, Yu. F. Markov

1898 (2838) Diffusion and isotopic effect in sodium bromide single crystals. . . . . A. N. Murin, I. V. Murin, V. I. Portnyagin, A. M. Andreev

1900 (2840) Nature of the spontaneous deformation of vacuum condensates of barium titanate. . . . . Yu. Ya. Tomashpol'skii, M. A. Sevost'yanov

1902 (2842) Manifestation of low-symmetry effects in spin resonance of Fe^{3+} ions in $ZnWO_4$ . . . . . A. A. Bugai, O. G. Duliu, B. K. Krulikovskii, A. B. Roitsin

1904 (2844) Unequivalent positions of substitutional impurities in silicon carbide . . . . . O. V. Vakulenko

1906 (2846) Saturation of the combined resonance and polarization of nuclei by an alternating field in n-type InSb. . . . . V. P. Kalashnikov, I. I. Lyapilin

1907 (2848) Dependences of the properties of alloys on their compositions . . . . . B. V. Sal'nikov, Yu. P. Vorob'ev, A. N. Men'

1908 (2849) Weak ferromagnetism of neodymium and europium orthovanadites . . . . . G. V. Bazuev, I. I. Matveenko, V. G. Zubkov, G. P. Shveikin

1910 (2852) Influence of an external electric field on the levels of polynuclear complexes . . . . . A. E. Nikiforov, V. Ya. Mitrofanov, A. I. Krotkii

1912 (2854) "Quadrupole" echo in systems with a dipole–dipole interaction. . . . . Yu. N. Moskvich, N. A. Sergeev, G. I. Dotsenko

1914 (2857) Changes in the dislocation structure of silicon resulting from irradiation with ions of moderate energies ..... P. V. Pavlov, V. I. Pashkov, V. M. Genkin, G. V. Kamaeva, V. I. Nikishin, Yu. N. Ogarkov, G. I. Uspenskaya

Soviet Physics – Solid State Vol. 5, No. 10, April 1974

(Russian original: Fiz. Tverd. Tela, Vol. 15, No. 10, pp. 2865-3144, October 1973)

1917 (2865) Investigation of the nucleation and enlargement of dislocation loops during quenching and low-temperature annealing . . . . . V. V. Kirichenko, V. V. Slezov, V. N. Rozhanskii

1921 (2871) Elastic and photoelastic properties of proustite . . . . . I. I. Zubrinov, V. I. Semenov, D. V. Sheloput

1923 (2874) Superexchange in magnetic materials having narrow energy bands . . . . . V. M. Matveev, É. L. Nagaev

1925 (2877) Infrared line luminescence of α-SiC(15R) crystals . . . . I. S. Gorban', A. V. Slobodyanyuk

1927 (2880) Relationship between the force constants in the expansion of the potential energy of molecular crystals . . . . . V. A. Safronov, A. P. Ryzhenkov

1929 (2884) Magnetic resonance of the Pr^{141} and F^{19} nuclei in a PrF_3 single crystal . . . . . F. L. Aukhadeev, I. S. Konov

1931 (2888) Absorption of sound in insulators for arbitrary $\Omega\tau$ . . . . Yu. A. Logachev, B. Ya. Moizhes

1935 (2895) Magnetic ordering of tetragonally distorted ferrite $CuFe_2O_4$ . . . . . K. P. Belov, A. N. Goryaga, L. G. Antoshina

1937 (2899) Phase transition in the Ising model with a pure dipole interaction . . . . . P. N. Vorontsov-Vel'yaminov, I. A. Favorskii

1942 (2907) Investigation of the interaction of oxygen with the (111) face of a tungsten single crystal by the flash method . . . . . N. P. Vas'ko, Yu. G. Ptushinskii, A. A. Mitryaev

1945 (2913) Lifetimes of quasiparticles in a nonequilibrium superconductor . . . . . V. P. Seminozhenko

1947 (2917) Investigation of the electrical structure of mirror-image pairs of cleaved surfaces of LiF, CaF_2, and MgO single crystals . . . . . G. I. Distler, E. I. Kortukova

1950 (2922) Investigation of the photoelasticity of ferroelectrics by the diffraction of light on ultrasound . . . . . V. G. Martynov, K. S. Aleksandrov, A. T. Anistratov

1953 (2927) Magnetic properties of small spherical iron particles in the temperature range 4.2-300°K . . . . . A. E. Petrov, A. N. Kostygov, V. I. Petinov

1957 (2932) Polaritons in the region of two-electron states in crystals . . . . . Yu. B. Gaididei, V. M. Loktev

1962 (2941) Propagation of sound in CdS crystals at high temperatures . . . . . M. B. Gitis, A. G. Kopanskii

1966 (2947) Investigation of the composition dependence of an increase in the creep deformation in the Pb–In system at the superconducting transition temperature . V. G. Bar'yakhtar, I. A. Gindin, N. S. Gubin, E. I. Druinskii, V. P. Lebedev, Ya. D. Starodubov, I. I. Fal'ko

1970 (2954) Investigation of amorphous films on single crystals by elastic scattering of channeled accelerated ions . . . . . N. A. Skakun, N. P. Dikii, P. P. Matyash, P. A. Svetashev

1973 (2958) Many-center structure of the ESR spectra of $KMgF_3$ and $KZnF_3$ crystals activated with Eu^{2+} and Gd^{3+} ions . N. S. Al'tshuler, É. Kh. Ivoilova, L. D. Livanova, V. G. Stepanov, A. L. Stolov

1976 (2963) Crystal field and magnetic anisotropy of RCo_5 compounds . . . . . Yu. P. Irkhin, E. I. Zabolotskii, E. V. Rozenfel'd, V. P. Karpenko

1979 (2967) Time dispersion of the electron polarizability and equations governing lattice vibrations . . . . . K. B. Tolpygo

1982 (2972) Absorption of ultrasonic waves in indium antimonide crystals . . . . . S. N. Ivanov, G. D. Mansfel'd, E. N. Khazanov

1985 (2976) Interaction of dislocations with electron and hole centers in alkali halide crystals . . . . . S. Z. Shmurak, F. D. Senchukov

1987 (2980) Hyperfine interactions and deformation of crystals. Nonlinear effects in electron–nuclear double resonance . . . . . V. G. Grachev, B. A. Novominskii

1991 (2986) Investigation of the profiles of exciton lines of II–VI compounds . . . . . A. N. Georgobiani, Yu. V. Ozerov, H. Friedrich

 Copyright © 1974 American Institute of Physics

1995 (2992) Rate of band-edge motion at the transition of BiSb alloys to the gapless state in a magnetic field . . . N. B. Brandt, S. M. Chudinov, V. G. Karavaev, B. A. Korchak
1997 (2996) Phonon Green's function for a bounded crystal . . . . . L. M. Satarov
2001 (3003) Influence of the supramolecular structure on the melting behavior of crystallites in polymers . . . . . I. V. Sochava, O. I. Smirnova
2003 (3006) "Soft mode" in the vibrational spectrum of $CaTiO_3$ . . . . . A. S. Knyazev, Yu. M. Poplavko, V. P. Zakharov, V. V. Alekseev
2006 (3011) Dispersion of the electrooptic effect in lead magnoniobate in the visible part of the spectrum . . . . L. S. Kamzina, N. N. Krainik, A. A. Berezhnoi
2008 (3014) Electrification of an ionic crystal by plastic deformation . . . . . M. I. Kornfel'd
2012 (3020) Surface vibrations in α quartz . . . . . I. I. Reshina, V. M. Zolotarev
2015 (3025) Transmission of luminescence by a boundary of a crystal in the vicinity of exciton resonances in the presence of spatial dispersion . . . . . S. A. Permogorov, A. V. Sel'kin
2018 (3029) Mechanism of charge transfer in the lattices of ammonium salts . . . . . É. F. Khairetdinov, A. I. Burshtein, V. V. Boldyrev
2022 (3035) Longitudinal relaxation of protons in concentrated paramagnets at low temperatures (non-Kramers ions) . . . . . S. L. Tsarevskii
2025 (3039) Damping of spin waves in a ferromagnet with an easy-plane magnetic anisotropy . . . . . V. G. Bar'yakhtar, V. P. Krasnov, V. L. Sobolev
2028 (3044) Anomalies of the transport coefficients of $MnTe_2$ near the Néel point . . . . . B. V. Avdeev, Yu. P. Krasheninin
2030 (3048) Theory of the exchange interaction . . . . . G. M. Nedlin
2033 (3053) Propagation of electromagnetic waves in conductors with a nonstandard electron dispersion law . . . . . F. G. Bass, L. B. Vatova, Yu. G. Gurevich

BRIEF COMMUNICATIONS

2038 (3062) Influence of terms linear in $\mathcal{K}$ on exciton levels in cubic crystals . . . . . D. L. Fedorov
2040 (3065) Structural transitions in silica subjected to high pressures . . . . . G. M. Bartenev, V. G. Chistoserdov, A. D. Tsyganov, V. V. Gorbachev
2042 (3067) Kinetics of a phase transition of the second kind in triglycine sulfate at high hydrostatic pressures . . . . . A. A. Petrov
2043 (3069) Orientational magnetooptic effect in single-crystal nickel and iron films . . . . . G. S. Krinchik, E. E. Chepurova, S. E. Yurchenko
2045 (3071) Amplification of ultrasound in CdS in the presence of electron injection from contacts . . . . . V. S. Gaevskii, I. Ya. Kucherov, V. M. Perga
2047 (3074) Compton profiles of beryllium and graphite . . . . . V. P. Tsvetkov, L. V. Shevtsov
2048 (3076) Exoemission of electrons from magnesium deformed by stretching . . . . . A. M. Shkil'ko, A. A. Kresnin
2050 (3078) Temperature of the superconducting transition in small tin particles . . . . . Yu. G. Morozov, I. G. Naumenko, V. I. Petinov
2052 (3080) Synthetic diamonds with an "anomalous" microdistribution of dispersed nitrogen impurities . . . A. V. Nikitin, V. M. Radyanskii, A. I. Novozhilov
2054 (3082) Investigation of barium titanate at submillimeter wavelengths . . . . . V. V. Meriakri, Yu. M. Poplavko, E. F. Ushatkin, V. M. Pashkov
2056 (3084) Magnetic birefringence of $FeBO_3$ . . . . . I. S. Édel'man, A. V. Malakhovskii
2058 (3086) Mössbauer investigations of structure transitions in some compounds formed between iron and group VB elements . . . . . V. V. Isaev-Ivanov, N. M. Kolchanova, V. F. Masterov, D. N. Nasledov, V. K. Yarmarkin
2060 (3088) Amplitude dependence of the internal friction in silicon . . . . . R. I. Garber, I. I. Soloshenko, I. A. Charkina

2061 (3090) Investigation of defects in titanium dioxide by the method of thermally stimulated depolarization currents . . . . . A. L. Avdeev, Yu. L. Danilyuk, L. A. Rozenberg

2062 (3091) Determination of the rate of surface annihilation of singlet excitons in anthracene single crystals . . . . . P. A. Kondratenko, M. V. Kurik

2064 (3093) Noncentral forces and the stability of crystal structures . . . . . Yu. Kh. Vekilov, A. E. Kadyshevich, A. P. Rusakov

2066 (3095) Magnetooptic properties of materials with a cylindrical domain structure . . . . . A. M. Balbashov, A. Ya. Chervonenkis, A. V. Antonov

2068 (3097) Anomaly in the temperature dependence of the velocity of sound in sodium azide . . . . . V. N. Belomestnykh, A. A. Botaki, D. S. Levochko

2070 (3100) Determination of the "critical" thickness of (001) single-crystal nickel films . . . . . V. G. Pyn'ko, S. V. Kan, R. M. Dympilov

2071 (3101) Cylindrical domains in orthoferrite plates oriented perpendicularly to the optic axis . . . . . M. V. Chetkin, A. N. Shalygin, V. A. Drachev, A. M. Balbashov, A. Ya. Chervonenkis

2072 (3102) Measurement of the strength of etched glass of various thicknesses . . . . . L. D. Volovets, G. S. Pugachev

2074 (3104) Change in the dislocation density in lithium fluoride crystals during annealing under load . . . . . I. A. Gindin, É. N. Metolidi, I. M. Neklyudov

2076 (3106) Magnetic properties of chalcogenide spinels $Cd_{1-x}Cu_xCr_2S_4$, $CdCr_2Se_{4-\gamma}$, and $FeCr_2S_{4-\gamma}$ . . . . . K. P. Belov, Yu. D. Tret'yakov, I. V. Gordeev, L. I. Koroleva, A. V. Ped'ko, S. D. Batorova, V. A. Alferov, Yu. G. Saksonov, M. A. Shalimova

2078 (3108) Phase transitions in $ZnSnAs_2$ . . . . . Yu. V. Rud, M. Tashtanova

2080 (3112) Diffusion of Ag, In, Sn, and Sb impurities in liquid germanium . . . . . P. V. Pavlov, É. V. Dobrokhotov

2082 (3114) Pseudopotential method and the problem of ordering in alloys . . . . . G. L. Krasko, A. B. Makhnovetskii

2084 (3116) Cotton–Mouton effect in strong magnetic fields . . . . . V. V. Druzhinin, O. M. Tatsenko

2086 (3119) Temperature dependence of the resistivity of copper single crystals . . . . . G. I. Kulesko, V. N. Matveev

2088 (3121) Scattering of quasiparticles by dislocations in superconductors . . . . . V. P. Seminozhenko

2090 (3123) Anisotropy of the transport coefficients of Mn_5Si_3 . . . . . K. I. Meizer, R. P. Krentsis, A. A. Frolov, P. V. Gel'd

2092 (3125) Thermodynamic theory of a phase transition in hematite . . . . . G. K. Chepurnykh

2094 (3128) Electron–nuclear double resonance of F_A(Li) centers in KCl subjected to an electric field . . . . . Yu. V. Fedotov, V. G. Grachev, N. N. Bagmut

2095 (3129) Excitation of surface electromagnetic waves in a solid-state plasma . . . . . R. R. Kikvidze, V. G. Kotetishvili, A. A. Rukhadze

2096 (3131) Application of the Riemann method to the calculation of the diffraction of x rays in a crystal with a quadratic displacement field . . . . . P. V. Petrashen'

2098 (3133) Calculation of the thermodynamic functions of an ideal crystal lattice . . . . . V. A. Slyusarev, I. A. Burakhovich

2100 (3135) Interaction between point defects in the presence of a quantum particle . . . . . A. S. Dolgov

Soviet Physics – Solid State Vol. 15, No. 11, May 1974

(Russian original: Fiz. Tverd. Tela, Vol. 15, No. 11, pp. 3145–3488, November 1973)

2101 (3145) Structure of silicon and germanium films on the (110) face of tungsten . . . . . B. A. Boiko, D. A. Gorodetskii, A. A. Yas'ko

2107 (3154) Group-theoretical analysis of the phonon spectrum of MnO . . . . . M. S. Gasanov

2111 (3160) Temperature dependences of phononless lines in the spectra of organic crystals . . . . . M. N. Sapozhnikov

2117 (3169) Surface diffusion of barium atoms on tungsten in strong electric fields . . . . . G. G. Vladimirov, S. S. Lobanova

2120 (3173) New variational method of solution of one-dimensional problems . . . . . A. A. Ovchinnikov, V. Ya. Krivnov, A. F. Shvets

2123 (3178) Nonresonance absorption of sound in uniaxial antiferromagnets in strong magnetic fields . . . . . I. N. Oleinik

2129 (3188) Raman scattering of light by NO_3^- and NO_2^- molecular ions in alkali halide crystals . . . . . L. A. Rebane, T. Yu. Khal'dre, A. E. Novik, A. A. Gorokhovskii

2134 (3196) Creep and lifetime under load of high-strength copper films . . . . . A. I. Il'inskii, L. S. Palatnik, N. P. Sapelkin

2138 (3202) Thermodynamics of the ferroelectric transition in triglycine selenate near the triple point . . . . . G. G. Leonidova, V. P. Mylov, V. M. Varikash

2140 (3206) Nonlinear effects in the propagation of elastic waves in piezoelectric crystals . . . . . V. V. Lemanov, N. K. Yushin

2143 (3211) Excitation of higher harmonics by free carriers in semiconductors . . . . . V. L. Malevich, É. M. Épshtein

2145 (3214) Analytic nature of the dependence of the electric strength on the parameters of a disordered condensed system . . . . . V. F. Korzo

2150 (3222) Two types of dislocation network initiated in silicon by the diffusion of phosphorus . . . . . S. K. Maksimov, G. V. Akulova

2152 (3226) Noncollinear interaction of bulk elastic waves in crystals . . . . . K. K. Ermilin, V. E. Lyamov, P. A. Pyatakov

2155 (3231) ESR and optical spectra of Eu^{2+} ions in a single crystal of $LiBaF_3$ . . . . . N. S. Al'tshuler, S. L. Korableva, L. D. Livanova, A. L. Stolov

2158 (3235) Transport in arbitrary electric and magnetic fields in the absence of electron–electron correlations . . . . . V. V. Bryksin, Yu. A. Firsov

2167 (3250) "Defect" mechanism of nuclear quadrupole spin–phonon coupling . . . . . G. L. Antokol'skii, E. V. Charnaya, V. A. Shutilov

2173 (3260) Hydrolytic mechanism of glass fracture under load . . . . V. A. Bershtein, V. V. Nikitin, V. A. Stepanov, L. M. Shamrei

2177 (3266) Thermal softening of metals . . . . . V. S. Bobrov, Yu. A. Osip'yan

2179 (3269) Influence of temperature on the exciton condensation conditions in germanium . . . . . V. S. Bagaev, N. A. Penin, N. N. Sibel'din, V. A. Tsvetkov

2181 (3273) Adsorption of strontium on the (110) face of tungsten . . . E. V. Klimenko, A. G. Naumovets

2185 (3280) Enhancement of the spin–orbit interaction by the influence of a heavy cation in an $NaNO_3:Tl^+$ crystal . . L. E. Reznik, P. R. Garber, A. V. Fesun

2189 (3286) Electrical conduction and associated processes in ionic crystals . . . . . V. I. Solunskii, E. L. Khavkin

2192 (3290) Magnetoelastic coupling of Co^{2+} ions in the yttrium iron garnet structure . . . . . L. M. Protopopova, G. A. Petrakovskii, É. M. Smokotin, R. A. Petrov

2194 (3293) Melting temperature of quantum crystals and the problem of superfluid hydrogen . . . . . B. T. Geilikman

2197 (3298) Density of an exciton condensate in germanium . . . . . V. M. Asnin

2201 (3304) Selective transparency of metal plates due to the interaction between electromagnetic and acoustic waves . . . . . G. I. Ivanovski, M. I. Kaganov

Copyright © 1974 American Institute of Physics

2206 (3312) Spectra of extraordinary cyclotron waves in metals ... T. D. Kaladze, D. G. Lominadze, K. N. Stepanov
2209 (3318) Thermal broadening, shift, and profile of phononless lines in the spectra of O_2^- and S_2^- molecular centers .. L. A. Rebane, A. M. Freiberg, Yu. Ya. Koni
2213 (3325) Superconducting properties of thin films deposited on magnetic substrates ..... A. R. Isaakyan
2217 (3332) Surface effects in the spectra of CdSe single crystals .. N. A. Davydova, É. N. Myasnikov, M. I. Strashnikova
2221 (3338) Creation of bound exciton states in molecular crystals . N. A. Efremov, E. P. Kaminskaya
2224 (3344) Quantum theory of galvanomagnetic effects in semiconductors ..... V. V. Bryksin, Yu. A. Firsov
2230 (3354) Absorption of ultrasound in superconducting alloys .... Yu. M. Gal'perin, V. I. Kozub
2233 (3359) Raman scattering spectra of the ferroelectric phase of a crystal of RbH_2PO_4 (RDP). ..... E. A. Popova
2235 (3362) Hot electrons in ferromagnetic semiconductors ..... I. Ya. Korenblit, B. G. Tankhilevich
2240 (3371) Statistical kinetics of thermally activated fracture .... V. A. Petrov, A. N. Orlov
2245 (3379) Doppler-shifted cyclotron resonance in indium..... V. V. Lavrova, V. G. Skobov, L. M. Fisher, A. S. Chernov, V. A. Yudin

BRIEF COMMUNICATIONS

2250 (3387) Statistical theory of melting and sublimation ..... G. S. Bokun, V. S. Vikhrenko, I. I. Narkevich, L. A. Rott
2252 (3389) Temperature dependences of the elastic constants and infrared dispersion frequency of NaI single crystals.. I. N. Gyrbu, V. L. Ul'yanov, A. A. Botaki
2254 (3392) Elevation of the superconducting transition temperature in thin semiconducting films on metal substrates .... V. M. Agranovich, B. P. Antonyuk
2256 (3394) Calculation of microscopic characteristics of vacancies in III–V compounds..... V. D. Verner, D. K. Nichugovskii
2257 (3396) Anomalous diffusion of germanium in silicon..... P. V. Pavlov, V. I. Pashkov, É. V. Dobrokhotov
2259 (3398) Cerium in MPO_4 orthophosphate crystals (M = Y, Lu) .. N. V. Starostin, S. A. Titov
2261 (3400) Temperature and concentration dependences of the spin–lattice relaxation time of chromium ions in GASH ..... R. Kirmze, B. V. Solov'ev, V. A. Sakharov, B. G. Tarasov
2263 (3402) Influence of fluctuations on the rate of nuclear spin relaxation in superconductors in the presence of a static magnetic field ..... A. A. Golub
2265 (3404) Hole bands of a CaF_2 crystal..... N. V. Starostin, V. A. Ganin
2267 (3407) Anisotropy of the electrical resistivity of germanium telluride ..... S. I. Novikova, L. E. Shelimova, N. Kh. Abrikosov, A. S. Avilov, M. A. Korzhuev
2269 (3409) Influence of an external electric field on the ESR spectrum of Gd^{3+} ions in $CaMoO_4$..... N. E. Domracheva, R. Sh. Usmanov, V. S. Kropotov
2270 (3410) Investigation of intramolecular rotations in a solid using nuclear quadrupole resonance of N^{14}..... A. I. Andreeva, V. L. Matukhin, D. Ya. Osokin, I. A. Safin
2272 (3412) Comparison of the effect of tin and lead on the band structure of bismuth ..... G. A. Ivanov, A. N. Surovtsev
2273 (3414) Energy spectra of helium ions scattered from a (100) cleaved surface of lithium fluoride..... V. G. Matsevich, G. K. Zyryanov
2274 (3415) Secondary electron emission from polycrystalline tetracene films..... L. Ya. Bubnov, E. L. Frankevich, B. S. Yakovlev
2276 (3417) Trapping levels in $SrTiO_3$ single crystals ..... V. Ya. Kunin, A. N. Tsikin, N. A. Shturbina
2278 (3420) Detection of submicroscopic cracks in rocksalt crystals under load..... V. S. Ryskin, V. I. Betekhtin, A. I. Slutsker
2280 (3422) Spin–lattice relaxation of a paramagnetic defect in a crystal lattice ..... D. S. Tsitsishvili
2281 (3423) Superconductivity of vanadium at pressures up to 250 kbar ..... N. B. Brandt, O. A. Zarubina
2283 (3426) Dislocation description of the dynamic behavior of a slip band..... V. S. Boiko
2285 (3428) Optical transitions from the valence band to a local level in the forbidden band of ZnS and in alkali halide crystal phosphors ..... A. S. Kuznetsov

2287 (3430) Geometry of the hydrogen bond and of the van der Waals interaction at O—H...O contacts in molecular crystals ..... Yu. V. Zefirov

2289 (3432) Influence of molecular vibrations on the transfer of thermal energy in molecular crystals ..... R. M. Vlasova, Yu. G. Nurullaev, A. V. Petrov, M. I. Cherkashin

2291 (3434) L and M x-ray emission spectra of Fe—Ni alloys and the Invar anomaly ..... A. I. Zakharov, V. A. Fomichev

2293 (3436) Superconductivity and magnetic susceptibility of the α and ω modifications of titanium and zirconium .... V. F. Degtyareva, Yu. S. Karimov, A. G. Rabin'kin

2295 (3439) Equations of state of sodium chloride ..... V. A. Zhdanov, V. V. Polyakov, V. F. Konusov

2297 (3440) Recombination or capture cross section ..... V. V. Antonov-Romanovskii

2298 (3442) Approximate method for the calculation of bimolecular reactions ..... V. V. Antonov-Romanovskii

2300 (3444) Influence of dislocations on the energy gap in superconductors ..... V. P. Seminozhenko

2301 (3446) Long- and short-range order in alloys with CuAu-type superstructures ..... N. S. Golosov, G. S. Golosova, L. E. Popov

2302 (3448) Properties of a superconducting alloy Nb_3Al prepared by vacuum evaporation ..... A. I. Golovashkin, I. S. Levchenko, G. P. Motulevich

2304 (3449) Current—voltage characteristics of disperse systems .. S. V. Iliarionov

2306 (3452) Relaxation of a deforming stress, lifetime of mobile dislocations, and their density in a KCl crystal ..... V. Z. Bengus, E. D. Tabachnikova, V. N. Ostroverkh

2308 (3454) Difference between the absorption of longitudinal and transverse sound in doped crystals ..... Yu. A. Logachev

2310 (3456) Temperature dependence of the electrical conductivity of liquid semiconductors of the As_2Se_3—As_2Te_3 system ..... A. A. Andreev, É. A. Lebedev, E. A. Shmuratov, V. Kh. Shpunt

2312 (3458) Influence of noncentral forces on the temperature dependence of the elastic constants of crystals with the NaCl-type lattice ..... S. Yu. Davydov

2314 (3460) Influence of Co^{2+} ions on the magnetostriction of a W-type hexaferrite ..... S. P. Kuntsevich, V. P. Palekhin

2316 (3462) Formation of impurity complexes associated with the appearance of the U band in potassium chloride ..... Ya. N. Pershits, V. N. Shonin

2318 (3465) Manifestations of the band structure of sphalerite-type crystals in x-ray and photoelectric emission spectra ..... V. V. Nemoshkalenko, V. G. Aleshin, M. T. Panchenko, A. I. Senkevich

2320 (3467) Structure of phonon wings in fluorescence spectra of impurities of diarylethylenes in naphthalene crystals . V. K. Dobrokhotova, Yu. V. Naboikin, I. N. Chukanova

2322 (3469) Theory of two-exciton states in two-dimensional antiferromagnetic dielectrics ..... Yu. B. Gaididei, V. M. Loktev

2324 (3471) Profile of a field-free spin resonance line of powders in the presence of an external electric field ..... M. G. Blazha, A. B. Roitsin

2326 (3473) Calculation of the binding energy and of the equilibrium lattice parameter of disordered alloys in the Li—Mg system ..... A. Ya. Belen'kii, Z. A. Gurskii, G. L. Krasko

2328 (3476) Disorder in a condensed medium and deviations from steady-state conditions during breakdown ..... V. F. Korzo

2330 (3478) Characteristics of a phase transition in thin ferroelectric films ..... V. L. Vinetskii, M. A. Itskovskii, L. S. Kremenchugskii

2332 (3481) Influence of point obstacles on the mobility of dislocations in crystals ..... B. M. Strunin

Soviet Physics – Solid State Vol. 15, No. 12, June 1974

(Russian original: Fiz. Tverd. Tela, Vol. 15, No. 12, pp. 3489-3734, December 1973)

2335 (3489) Nonlinear theory of helicon instability . . . . . A. A. Bulgakov, S. I. Khankina, V. M. Yakovenko

2338 (3494) Equivalence of two approaches to a boundary-value problem including spatial dispersion . . . . . V. A. Kiselev

2341 (3499) Rotatable magnetic anisotropy of single-crystal films of an Ni–Zn–Co ferrite. . . . . L. I. Koshkin, E. G. Guseva,

2344 (3504) Acoustoelectronic effects and photoconductivity in semiconductors in a magnetic field . . . . . Yu. G. Bachinin

2346 (3508) Polymorphism of Bi_2Se_3 at high pressures and temperatures . . . . . É. Ya. Atabaeva, N. A. Bendeliani, S. V. Popova

2349 (3513) Temperature dependences of the magnetic properties of cobalt-substituted Ni–Zn ferrites . . . . . N. V. Dmitrieva, Ya. S. Shur

2353 (3520) Paramagnetic cadmium centers in alkali halide crystals P. G. Baranov, R. A. Zhitnikov, N. I. Mel'nikov

2356 (3525) Theory of relaxation processes in antiferromagnets . . . V. L. Sobolev

2360 (3532) Exciton–magnon transitions in the absorption spectra of $KMn_{1-x}Co_xF_3$ solid solutions . . . . . A. I. Belyaeva, V. V. Eremenko, N. V. Gapon, M. M. Kotlyarskii

2362 (3535) Local levels in an anisotropic ferromagnet with impurities . . . . . V. V. Gann, L. G. Zazunov

2365 (3540) Higher orders of the selective reflection of light by cholesteric liquid crystals . . . . . V. E. Dmitrienko, V. A. Belyakov

2367 (3544) Magnetic anisotropy of cubic crystals. . . . . V. S. Zapasskii

2370 (3550) Dislocation mechanism of changes in the volume of a pore in a single crystal under the influence of hydrostatic pressure . . . . . Ya. E. Geguzin, V. G. Kononenko

2375 (3558) Absorption of infrared light by crystals with heavy impurity centers. . . . . M. N. Botvinko, M. A. Ivanov

2380 (3567) Angular distributions of fast particles which experience blocking in the course of ion bombardment of gold single crystals . . . . . S. Ya. Lebedev, G. V. Lysova, V. E. Dubinskii

2384 (3573) Equations of the elasticity theory and the interaction of coherent acoustic waves with phonons in dielectrics . . Yu. A. Sinitsyn, V. M. Kontorovich, V. M. Tsukernik

2390 (3582) Influence of nonequilibrium carriers on the distribution of polarization in SbSI . . . . . N. M. Bezdetnyi, A. Kh. Zeinally, N. N. Lebedeva, G. V. Chenskii, M. K. Sheinkman

2393 (3586) Twinning and phase transitions in $CsSrCl_3$. . . . . L. A. Pozdnyakova, B. V. Beznosikov, I. T. Kokov, K. S. Aleksandrov

2395 (3589) Third-order nonlinear effects in a degenerate solid-state plasma in a magnetic field . . . . . A. P. Kopasov, V. Ya. Demikhovskii

2400 (3598) Ultrasoft x-ray emission spectra of CsCl-type phases. . A. S. Shulakov, T. M. Zimkina, V. A. Fomichev, V. Ya. Nagornyi

2402 (3602) Analysis of the magnetic resonance spectrum of localized spins in semiconductors . . . . . T. S. Al'tshuler, O. B. Vinogradova, A. F. Kukovitskii, É. G. Kharakhash'yan

2405 (3608) Acoustoelectric aftereffect in semiconductors . . . . . A. A. Chaban

2408 (3613) Effect of electron–phonon interaction on the electrical conductivity of metals under magnetic breakdown conditions . . . . . Vl. L. Ginzburg

2414 (3623) Scattering of coherent x radiation in magnetically ordered α-Fe_2O_3 and $FeBO_3$ crystals . . . . . V. G. Labushkin, N. N. Faleev, V. A. Figin

2416 (3625) Influence of an acoustic forbidden band on the absorption of sound and the acoustoelectric current in semiconductors and semimetals . . . . . B. D. Laikhtman, Yu. V. Pogorel'skii

2421 (3634) Effect of a magnetic field on infrared absorption and luminescence of electron–hole droplets in germanium V. N. Murzin, V. A. Zayats, V. L. Kononenko

2427 (3643) Theory of low-temperature electron relaxation in a concentrated paramagnet . . . . . R. R. Nigmatullin

2431 (3651) Influence of the drift of holes on the absorption of longitudinal sound in tellurium . . . . . Yu. V. Ilisavskii, É. Z. Yakhkind

 Copyright © 1974 American Institute of Physics

2434 (3656) Propagation of acoustic waves in crystals with helical spin ordering . . . . . K. B. Vlasov, V. G. Bar'yakhtar, E. P. Stefanovskiĭ

2439 (3664) Polytypism and luminescence of PbI_2 crystals . . . . . I. V. Blonskiĭ, I. S. Gorban', V. A. Gubanov, Ya. A. Lyuter, L. V. Poperenko, M. I. Strashnikova

BRIEF COMMUNICATIONS

2442 (3669) Thermal conductivity and expansion of lithium molybdate single crystals . . . . . P. V. Panasyuk, I. D. Tretyak

2443 (3670) Distribution of the energies of different groups of inelastically reflected electrons . . . . . I. M. Bronshtein, V. P. Pronin, V. M. Stozharov

2444 (3672) Possibility of spectral diffusion in systems of identical spins with an anisotropic g factor . . . . . B. E. Vugmeister

2446 (3675) Magnetic properties of systems exhibiting a cooperative Jahn–Teller effect . . . . . M. D. Kaplan, B. G. Vekhter

2448 (3677) Gunn domain instability increment . . . . . M. I. Tribel'skiĭ

2449 (3678) Substructure of domains in magnesium–manganese ferrite films . . . . . T. A. Dunaeva-Mitlina

2451 (3681) Effective exchange fields in RFe_2 and RFe_3 type compounds of rare-earth metals with iron . . . . . S. A. Nikitin, A. M. Bisliev

2453 (3683) Magnetic resonance of spins coupled by the Ising interaction . . . . . G. O. Berim, M. M. Zaripov, A. R. Kessel', É. G. Kharakhash'yan

2455 (3685) Fine structure in the absorption spectrum of silver-doped KI crystals . . . . . I. V. Nedzvetskaya, N. I. Ivanova

2456 (3687) Magnetic state of the Cr^{3+} ion in the compound $CuCr_2O_4$. K. P. Belov, A. N. Goryaga, L. G. Antoshina, T. Koralem

2457 (3688) Some new mechanisms of indirect exchange interaction . M. V. Eremin, A. M. Leushin

2459 (3690) Magnetic impurity states in $Eu_{1-x}Gd_xO$ . . . . . A. A. Samokhvalov, T. I. Arbuzova, M. I. Simonova, L. D. Fal'kovskaya

2461 (3692) Zones of adsorbed-atom capture in thin films of copper on carbon . . . . . Gl. S. Zhdanov

2463 (3695) Fuchs equations for hcp lattices . . . . . V. A. Zhdanov, A. V. Zhukov, V. F. Konusov

2464 (3696) Temperature dependence of the forbidden-band width of $Ba_{0.50}Sr_{0.50}Nb_2O_6$ single crystals in the phase transition region . . . . . V. G. Savitskiĭ, R. N. Kovtun, V. E. Aleksyuk, P. F. Protsakh

2465 (3698) Quantum transport equations for magnons in parametric excitation of spin waves . . . . . V. M. Tsukernik, R. P. Yankelevich

2466 (3700) Mobility of tilt boundaries in aluminum . . . . . L. S. Shvindlerman, E. M. Fridman

2468 (3702) Low-frequency spectrum of the Raman scattering and the tunneling of protons (deuterons) in $Rb(D_xH_{1-x})_2PO_4$ crystals . . . . . B. N. Mavrin, Kh. E. Sterin, A. V. Mishchenko, L. N. Rashkovich

2470 (3705) Spectrum of an F center in a dislocation field . . . . . J. Janszky

2471 (3707) Photoinduced changes in the magnetic properties of $Y_3Fe_{5-x}Si_xO_{12}$ . . . . . P. S. Kuts, V. F. Kovalenko, V. A. Ruban

2473 (3709) Application of the orthogonalized plane-wave method to a crystal of CaF_2 . . . . . N. V. Starostin, M. P. Shepilov

2475 (3711) Negative photoplastic effect in cadmium sulfide . . . . . Yu. A. Osip'yan, M. Sh. Shikhsaidov

2477 (3713) Electrical conductivity of vanadium phosphate glasses containing cuprous oxide impurities . . . . . L. D. Bogomolova, T. F. Dolgolenko, V. N. Lazukin, I. V. Filatova

2478 (3714) Theory of the magnetic anisotropy of RCo_5 compounds . V. P. Karpenko

2479 (3716) Negative longitudinal magnetoresistance of $Cd_xHg_{1-x}Te$ . . . . . N. N. Berchenko, M. V. Pashkovskiĭ

2481 (3718) Influence of the magnon–phonon interactions on the width of an antiferromagnetic resonance lines . . . . . V. L. Sobolev

2482 (3719) Propagation of magnetoelastic waves in an yttrium iron garnet sphere . . . . . S. A. Mironov, O. P. Obrubov, V. V. Fitenko, A. S. Shcherbakov

2484 (3722) Tunnel spectrum of barrier layers in junctions based on bulk aluminum . . . . . P. N. Chubov, I. K. Yanson

2486 (3724) Acoustic pulse in an elastic medium with time-dependent properties . . . . . V. M. Levin, L. A. Chernozatonskii
2488 (3726) Influence of multiple emission of optical phonons on the profile of cyclotron resonance lines . . . . . I. Giyazov, L. I. Korovin
2490 (3728) Lifetime of a quasiparticle in a current-carrying superconductor . . . . . V. G. Bar'yakhtar, V. P. Seminozhenko
2492 (3730) Inelastic scattering of neutrons in antiferromagnets . . . V. L. Sobolev
2493 (3732) Absorption of ultrasound in superconductors with overlapping energy bands . . . . . E. I. Druinskii